

Doc code: IDS

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PTO/SB/08a (01-10)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Don Cook	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	BEALCI-91286	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4055317		1977-10-25	Greiss	
	2	4884767	A	1989-12-00	Shibata	
	3	5577358	A	1996-11-00	Franke	
	4	6079669	A	2000-06-00	Hanay et al.	
	5	6889936	B1	2005-05-00	Pho et al.	
	6	7222820	B2	2007-05-29	Wentland et al.	
	7	7284287	B2	2007-10-00	Cooper et al.	
	8	8109469	B2	2012-02-00	Breuer et al.	

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	Examiner Name			
	Attorney Docket Number		BEALCI-91286	

	9	8162258	B2	2012-04-00	Joannis et al.	
	10	8167244	B2	2012-05-00	Johnson et al.	

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	1	20060192050	A1	2006-08-00	Cheung et al.	
	2	20070241232	A1	2007-10-00	Thompson	
	3	20070295863	A1	2007-10-00	Thompson	
	4	20090050738	A1	2009-02-26	Breuer	
	5	20090065642	A1	2009-03-00	Cheung et al.	
	6	20090200422	A1	2009-08-13	Johnson	
	7	20090255437	A1	2009-10-15	Hatchet	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date			
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	Examiner Name			
	Attorney Docket Number	BEALCI-91286		

	8	20110121134	A1	2011-05-00	Schotte et al.	
	9	20110139930	A1	2011-06-00	Sutthoff et al.	
	10	20120112505	A1	2012-05-00	Breuer et al.	
	11	20120273614	A1	2012-11-00	Ehlers et al.	
	12	20120325964	A1	2012-12-00	Hawkins et al.	

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	1	2005014395	WO	A1	2005-02-17	Thompson		<input type="checkbox"/>
	2	2005080196	WO	A1	2005-09-01	Leadern Invest Ltd		<input type="checkbox"/>

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Don Cook	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	BEALCI-91286	

	1	EPO, International Search Report and Written Opinion for PCT international Application No. PCT/US2011/033090 dated September 15, 2011	<input type="checkbox"/>
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If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference BEAFS-86253	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/US2011/033090	International filing date (day/month/year) 19/04/2011	(Earliest) Priority Date (day/month/year) 20/04/2010
Applicant BE INTELLECTUAL PROPERTY, INC.		

This International search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6b/s(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 2

- ☒ as suggested by the applicant
☐ as selected by this Authority, because the applicant failed to suggest a figure
☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2011/033090

A. CLASSIFICATION OF SUBJECT MATTER
INV. B64D11/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B64D B60N B63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/014395 A1 (THOMPSON JAMES [GB]) 17 February 2005 (2005-02-17) abstract page 15, line 1 - line 18 figures 10-12	1-22
A	DE 10 2007 009863 A1 (AIRBUS GMBH [DE]) 4 September 2008 (2008-09-04) abstract figure 5	1-22
A	WO 2005/080196 A1 (LEADERN INVEST LTD; BOCK THOMAS [FR]; COSTE JEAN-JAQUES [FR]) 1 September 2005 (2005-09-01) abstract figures 7,8	1-22

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

5 September 2011

Date of mailing of the international search report

15/09/2011

Name and mailing address of the ISA/
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Vachey, Clément

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2011/033090

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005014395 A1	17-02-2005	AT 509830 T EP 1648767 A1 EP 2289798 A2 JP 4604030 B2 JP 2009513419 A US 2007241232 A1 US 2011169306 A1	15-06-2011 26-04-2006 02-03-2011 22-12-2010 02-04-2009 18-10-2007 14-07-2011
DE 102007009863 A1	04-09-2008	US 2009050738 A1	26-02-2009
WO 2005080196 A1	01-09-2005	AU 2005214298 A1 AU 2009245829 A1 CN 1950256 A EP 1720766 A1 HK 1102073 A1 JP 2007523002 A US 2007170310 A1 US 2011210205 A1 ZA 200606862 A	01-09-2005 24-12-2009 18-04-2007 15-11-2006 28-05-2010 16-08-2007 26-07-2007 01-09-2011 30-04-2008



Form PCT/ISA/210 (patent family annex) (April 2005)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To: <div style="text-align: center;">see form PCT/ISA/220</div>		Date of mailing (day/month/year) see form PCT/ISA/210 (second sheet)	
Applicant's or agent's file reference see form PCT/ISA/220		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/US2011/033090	International filing date (day/month/year) 19.04.2011	Priority date (day/month/year) 20.04.2010	
International Patent Classification (IPC) or both national classification and IPC INV. B64D11/02			
Applicant BE INTELLECTUAL PROPERTY, INC.			
<p>1. This opinion contains indications relating to the following items:</p> <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application </div> <p>2. FURTHER ACTION</p> <p>If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p> <p>3. For further details, see notes to Form PCT/ISA/220.</p>			
Name and mailing address of the ISA:  <div style="margin-left: 10px;"> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465 </div>		Date of completion of this opinion see form PCT/ISA/210	
Authorized Officer Vachey, Clément Telephone No. +49 89 2399-3356			

Form PCT/ISA/237 (Cover Sheet) (July 2009)

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2011/033090

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1 (a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - ☐ on paper
 - ☐ in electronic form
 - b. (time)
 - ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	<u>1-22</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-22</u>
Industrial applicability (IA)	Yes: Claims	<u>1-22</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document:

D1 WO 2005/014395 A1 (THOMPSON JAMES [GB]) 17 February 2005
(2005-02-17)

The present application does not meet the criteria of Article 33(2) PCT, because the subject-matter of claim 1 is not new.

D1 discloses (fig.10):

A lavatory (86) for a cabin of an aircraft, the cabin including a structure (88) having an aft portion that is substantially not flat in a vertical plane, the lavatory comprising:

a lavatory stall unit having at least one wall having a forward wall portion, said at least one wall defining an interior lavatory space, and said forward wall portion being configured to be disposed immediately aft of and adjacent to an aircraft cabin structure (20) having an exterior aft surface having a shape that is substantially not flat in a vertical plane; and wherein said forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aircraft cabin structure (90).

The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 5, 13, 19 which therefore are also considered not new.

Dependent claims 2-4, 6-12, 14-18 and 20-22 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty, see D1 (fig.10).

Independent claim 1, 5, 13 and 19 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art D1 being placed in the preamble (Rule 6.3(b)(i) PCT) and the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2011/033090

The features of claims 1-22 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Possible steps after receipt of the international search report (ISR) and written opinion of the International Searching Authority (WO-ISA)

General information	For all international applications filed on or after 01/01/2004 the competent ISA will establish an ISR. It is accompanied by the WO-ISA. Unlike the former written opinion of the IPEA (Rule 66.2 PCT), the WO-ISA is not meant to be responded to, but to be taken into consideration for further procedural steps. This document explains about the possibilities.
Amending claims under Art. 19 PCT	Within 2 months after the date of mailing of the ISR and the WO-ISA the applicant may file amended claims under Art. 19 PCT directly with the International Bureau of WIPO. The PCT reform of 2004 did not change this procedure. For further information please see Rule 46 PCT as well as form PCT/ISA/220 and the corresponding Notes to form PCT/ISA/220.
Filing a demand for international preliminary examination	<p>In principle, the WO-ISA will be considered as the written opinion of the IPEA. This should, in many cases, make it unnecessary to file a demand for international preliminary examination. If the applicant nevertheless wishes to file a demand this must be done before expiry of 3 months after the date of mailing of the ISR/ WO-ISA or 22 months after priority date, whichever expires later (Rule 54bis PCT). Amendments under Art. 34 PCT can be filed with the IPEA as before, normally at the same time as filing the demand (Rule 66.1 (b) PCT).</p> <p>If a demand for international preliminary examination is filed and no comments/amendments have been received the WO-ISA will be transformed by the IPEA into an IPRP (International Preliminary Report on Patentability) which would merely reflect the content of the WO-ISA. The demand can still be withdrawn (Art. 37 PCT).</p>
Filing informal comments	After receipt of the ISR/WO-ISA the applicant may file informal comments on the WO-ISA directly with the International Bureau of WIPO. These will be communicated to the designated Offices together with the IPRP (International Preliminary Report on Patentability) at 30 months from the priority date. Please also refer to the next box.
End of the international phase	At the end of the international phase the International Bureau of WIPO will transform the WO-ISA or, if a demand was filed, the written opinion of the IPEA into the IPRP, which will then be transmitted together with possible informal comments to the designated Offices. The IPRP replaces the former IPER (international preliminary examination report).
Relevant PCT Rules and more information	Rule 43 PCT, Rule 43bis PCT, Rule 44 PCT, Rule 44bis PCT, PCT Newsletter 12/2003, OJ 11/2003, OJ 12/2003

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

PCT

(10) International Publication Number
WO 2005/080196 A1

(51) International Patent Classification⁷: **B64D 11/00**,
11/06

(21) International Application Number:
PCT/SG2005/000042

(22) International Filing Date: 17 February 2005 (17.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004900872 20 February 2004 (20.02.2004) AU

(71) Applicant (for all designated States except US): **LEAD-ERN INVESTMENTS LIMITED**; P.O. Box 957, Off-shore Incorporations Centre, Road Town, Tortola (VG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BOCK, Thomas** [DE/FR]; c/o Airbus Central, 1, Rond Point Maurice Bellonte, MQ3, Felix Kracht Center, F-31707 Blagnac (FR). **COSTE, Jean-Jaques** [FR/FR]; c/o Blubay Yachts, 130, rue d'Antibes, F-06400 Cannes (FR).

(74) Agent: **LO, Peter**; Shook Lin & Bok, 1 Robinson Road, #18-00 Aia Tower, Singapore 048542 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

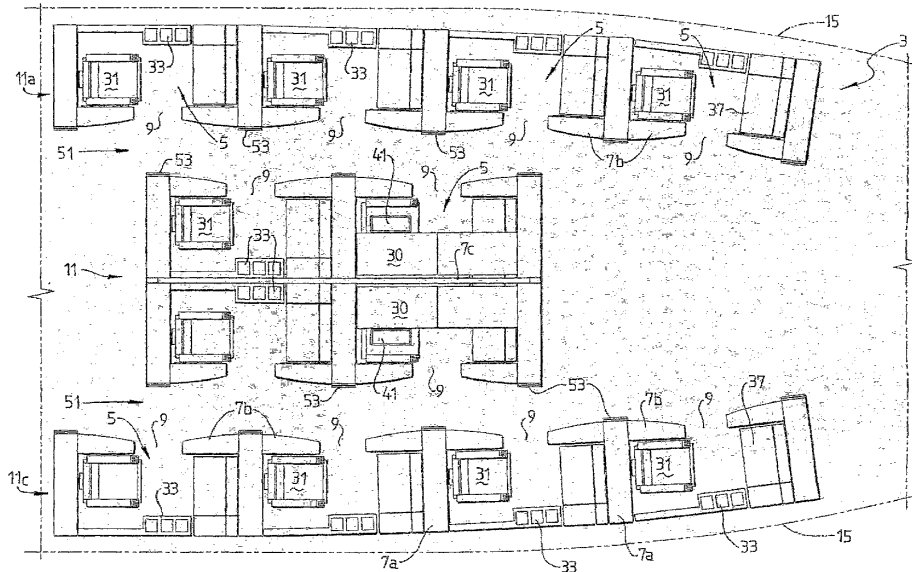
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: AN AIRCRAFT CABIN



(57) Abstract: An aircraft cabin that comprises a plurality of compartments (5) for passengers each having side walls (7a, 7b, 15) and accessible via a doorway (9) in one of the side walls (7a, 7b, 15). The compartments (5) include door assemblies for closing the doorways (9) and creating enclosed spaces and chair and other furniture interactively arranged in the compartment (5).

WO 2005/080196 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

- 1 -

AN AIRCRAFT CABIN

The present invention relates to an aircraft cabin.

5

In general terms, the invention is an aircraft cabin that comprises a plurality of "private" passenger compartments for passengers during an aircraft flight, with each compartment comprising walls that define a compartment space and being accessible via a doorway in one of the walls, and with each compartment at least comprising a chair for a passenger.

10

Preferably the cabin comprises a section of a total aircraft cabin.

15

Preferably the compartment walls are at least 1.5 m high.

20

More preferably the compartment walls are at least 1.6 m high.

The selection of the height of the compartment walls to be at least 1.5 m ensures privacy for passengers in the compartments.

25

Preferably the cabin comprises at least 3 rows of the compartments extending in a length-wise extending direction of the aircraft, with adjacent rows being separated by length-wise extending aisles, and with: (a) two outer rows being positioned along opposite sides of the aircraft with the aircraft side walls forming compartment walls, and (b) at least one internal row being positioned between the outer rows and separated from at least one outer row by a said length-wise extending aisle.

30

35

With this arrangement, the doorway walls define

- 2 -

the aisles, and the compartments are accessible from the aisles via the doorways.

Preferably the doorways divide the doorway walls
5 into two sections, with one section on each side of each doorway.

Preferably the doorways are positioned centrally
in the doorway walls.
10

Preferably the aisles are curved along the length thereof.

Preferably the curved aisles are formed by
15 forming the doorway walls as curved walls, for example by being convex as viewed from the aisles, and by positioning the compartments so that the doorways of the compartments on opposite sides of the aisles are not aligned.

20 More preferably the compartments are positioned so that the doorways of the compartments on one side of the aisles face the doorway walls on the other side of the aisles, and vice versa.

25 Forming the doorway walls as curved walls as viewed from the aisles means that there is additional space in these sections of the compartments for housing furniture in the compartments. This is an advantage because it makes it possible to make more efficient use of
30 the available space within the compartments.

Preferably the walls that form the two outer rows of the compartments comprise (a) the aircraft side walls, (b) walls that extend inwardly from the aircraft side
35 walls, and (c) the doorway walls. With this arrangement, the aircraft side walls form length-wise extending outer side walls of the compartments, the walls that extend

- 3 -

inwardly from the aircraft side walls form end walls of the compartments, and the doorway walls form length-wise extending inner side walls of the compartments.

5 Preferably the or each interior row of the compartments comprises a plurality of pairs of length-wise extending compartments, with the doorways of the compartments of each pair providing access to the compartments from aisles on opposite sides of the interior
10 row.

 Preferably the compartments of at least one pair of compartments is separated by a length-wise extending wall that is a removable wall, whereby the pair of
15 compartments may be converted into a double compartment by removing the removable wall.

 Preferably each compartment of at least one pair of compartments comprises single beds that can be moved
20 from storage positions to sleep positions that are in side-by-side relationship when the compartments are converted into the double compartment so as to form a double bed.

25 Preferably the cabin comprises a plurality of wardrobes in walls of the compartments that separate adjacent compartments in the rows of compartments.

30 Preferably the wardrobes include wardrobes that are mounted for sliding movement between storage positions in the walls and operative positions in which the wardrobes extend into the aisles and are accessible from the aisles.

35 Preferably each compartment includes doors for the doorways so that the compartments can be completely enclosed spaced when the doors are closed.

- 4 -

In general terms, the invention also comprises a private passenger compartment for a passenger during an aircraft flight that comprises walls that define a compartment space, a doorway in one of the walls that enables access to the compartment from an aisle, and a chair and other basic furniture located in the compartment space in an interactive way so that the furniture can be selectively arranged in a number of different configurations.

Preferably the compartment walls are at least 1.5 m high.

More preferably the compartment walls are at least 1.6 m high.

Preferably the doorway divides the doorway wall into two sections, with one section on each side of the doorway.

Preferably the doorway is positioned centrally in the doorway wall.

Preferably the sections of the doorway wall are curved, for example by being convex as viewed from the aisle, so that the compartment is wider in these sections of the compartment than in the region of the doorway.

Preferably the doorway wall includes at least one window.

More preferably the doorway wall includes at least two windows, with at least one window in each section of the doorway wall.

Preferably the windows include retractable blinds

- 5 -

that can be closed.

Preferably the compartment include a door assembly for closing the doorway.

5

The door assembly may comprise a door mounted for sliding movement from a retracted position within the doorway wall to a closed position in which the door extends across the doorway and closes the compartment.

10

Preferably the door assembly includes a pair of doors mounted for sliding movement inwardly towards each other from retracted positions within the sections of the doorway walls that are on opposite sides of the doorway.

15

Preferably the doors include transparent windows that are positioned so that the view through the windows in the doorway walls is not obscured by the doors when the doors are in the retracted positions.

20

Preferably the doors include retractable blinds that can be closed when the doors are in the closed positions.

25

Alternatively, the door assembly may comprise an upper rail and a curtain supported by the rail.

Preferably the rail is mounted for sliding movement between a retracted position within the doorway wall and an operative, ie closed, position in which the rail extends across the doorway.

30

Preferably the curtain is adapted to fold in a concertina fashion so that (a) the curtain folds against the doorway wall when the rail is slid into the retracted position and (b) the curtain expands and closes the doorway when the rail is in the operative position.

35

- 6 -

Preferably the configurations of the compartment comprise relaxation, work, and sleep configurations.

5 In addition to the chair, the other basic furniture of the compartment may comprise any one or more of a table assembly, a cadenza that houses the table assembly when the table assembly is in a folded position, a seat, and a bed.

10

With this selection of basic furniture, preferably the bed is foldable from a storage position in one of the compartment walls to a sleep position within the compartment.

15

Preferably the bed is a bi-fold bed.

Preferably the chair is foldable from an operative position in which a person can sit upright in the chair to an inoperative position in which the folded chair defines a support for the bed when the bed is in the sleep position.

20

Preferably the chair defines a bedside table when the chair is in the inoperative position.

25

Preferably the seat is adapted to define a support for the bed when the bed is in the sleep position.

30

Preferably the cadenza is adapted to define a support for the bed when the bed is in the sleep position.

35

Preferably the cadenza is movable from a raised operative position in which the cadenza can be accessed conveniently by a passenger seated in the chair to a lowered bed support position.

- 7 -

Preferably the table assembly is housed in the cadenza so that it can be moved, for example by being swivelled, from a stored position within the cadenza to an operative position with a table of the table assembly extending horizontally into the compartment proximate the chair.

There are a large number of possible interactive combinations of the above-described basic furniture within the compartment.

One interactive combination of the above-described furniture in the compartment space comprises: (a) the chair to one side of the doorway, (b) the seat to the other side of the doorway, (c) the cadenza against the wall opposite the doorway, and (d) the table assembly housed in the cadenza and movable between the stored position within the cadenza and the operative position with the table of the table assembly extending horizontally into the space between the chair and the seat.

In addition to the chair, the other basic furniture of the compartment may also comprise any one or more of a work desk, a table assembly, a seat, a bed and a visual display system of an entertainment system.

With this selection of basic furniture, in one embodiment the compartment comprises the following interactive combination of the above-described basic furniture in the compartment space: (a) the chair in one corner of the compartment space, (b) the work desk along at least a part of one wall of the compartment and proximate the chair, (c) the table assembly movable between a stored position adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

- 8 -

Preferably the compartment comprises the bed movable between a raised storage position and a lowered sleep position on the work desk.

5

Preferably the compartment comprises the seat adjacent at least a part of one wall of the compartment.

Preferably the work desk and the seat are positioned adjacent different walls of the compartment.

10

In another embodiment the compartment comprises the following interactive combination of the above-described basic furniture in the compartment space: (a) the chair in one corner of the compartment space, (b) the seat adjacent one wall of the compartment, (c) the table assembly movable between a stored position adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

20

In another embodiment the compartment comprises the following interactive combination of the above-described basic furniture in the compartment space: (a) the chair in one corner of the compartment space, (b) the bed movable between a raised storage position and a lowered sleep position, (c) the table assembly movable between a stored position adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

30

In another, although not the only other, embodiment the compartment comprises the following interactive combination of the above-described basic furniture in the compartment space: (a) the chair in one corner of the compartment space, (b) the seat adjacent a wall opposite the chair when the chair is in a take-off

35

- 9 -

position, (c) the work desk adjacent a wall that is in a lengthwise-extending direction of the aircraft, (d) the table assembly movable between a stored position adjacent the same wall as the work desk and an operative position with a table of the table assembly extending horizontally in a space between the chair and the seat, and (e) the bed movable between a raised storage position and a lowered sleep position on the work desk.

10 The term "take-off" position is understood herein to mean a position in which a person seated in the chair is facing forward in the direction of travel of the aircraft.

15 Preferably the work desk and the table assembly are located adjacent the wall that is opposite the wall that defines the doorway.

20 Preferably the work desk defines a support platform for the bed and supports the bed when the bed is in the sleep position.

25 Preferably the bed is stored in a raised position in the compartment space and is moveable down to a lowered operative position on the platform and is supported by the platform in the lowered position.

30 Preferably the work desk and the table assembly are positioned in relation to the chair when the table assembly is in the operative position so that the chair can be swiveled between positions facing the work desk and the table assembly.

35 Preferably a work platform of the work desk is vertically adjustable to accommodate different requirements of different passengers. This feature makes it possible to design the passenger seat to be with a

- 10 -

fixed vertical position.

Preferably the stored position of the table assembly is adjacent the work desk.

5

In an alternative, although not the only possible alternative embodiment, the stored position of the table assembly is within the space occupied by the work desk.

10

Preferably the table assembly comprises: (a) a base member that can slide between the stored position adjacent the side wall and the operative position between the chair and the seat, (b) a support arm pivotally mounted to the base member and foldable between the storage position and the operative position, and (c) a table pivotally mounted to the support arm.

15

The above-described table assembly can be moved from the stored position to the operative position by sliding or otherwise moving the base member outwardly from the storage position, lifting the table upwardly and inwardly into the compartment space and thereby pivoting the support arm upwardly and inwardly into the compartment space until the table is in the horizontal operative position.

25

Preferably the support arm comprises a table support element that is positioned to support an underside of the table when the table assembly is the operative position with the table in the horizontal position.

30

Preferably the table comprises side wings that can be folded between an inward storage position and an outward operative position.

35

Preferably the base member defines a storage compartment. By way of example, the storage compartment

- 11 -

may be used for storing a brief case, etc.

In general terms, the present invention also comprises the above-described table assembly.

5

In general terms, the present invention also comprises the above-described sliding door assembly.

In general terms the present invention also comprises an aircraft that comprises the above-described cabin.

10

The present invention is described further by way of example with reference to the accompanying drawings of which:

15

Figure 1 is a general layout diagram of one embodiment of a cabin in accordance with the present invention which includes two outer rows and one interior row of one embodiment of a passenger compartment in accordance with the present invention;

20

Figure 2 is a perspective view of the outer row passenger compartment in the cabin shown in Figure 1 as viewed from an aisle;

25

Figure 3 is a perspective view similar to Figure 2 with the compartment doors closed and the retractable blinds of the doors in a closed position;

30

Figure 4 is a perspective view similar to Figure 2 with compartment doors closed and retractable blinds of the doors in an open position;

35

Figure 5 is a top plan view of the compartment shown in Figure 2 with a table assembly in a storage position;

- 12 -

Figure 6 is a top plan view of the compartment shown in Figure 2 with a table assembly in an operative position;

5

Figure 7 is a perspective view of part of the compartment shown in Figure 2 with a passenger chair in a folded position;

10

Figure 8 is a perspective view similar to Figure 7 which illustrate a bed in an operative position;

15

Figure 9 is a perspective view of the compartment shown in Figure 2 which illustrates a wardrobe in an operative position extending into a passenger aisle;

Figure 10 is a top plan view of the interior row of compartments in the cabin shown in Figure 1;

20

Figure 11 is perspective views of one of the pairs of the passenger compartments shown in Figure 10 illustrating the sequence of steps to convert the separate compartments into a double compartment;

25

Figure 12 is perspective views of a section of the compartment shown in Figure 2 which illustrates a baby bassinet in the compartment;

30

Figure 13 is a perspective view of a section of the compartment shown in Figure 2 which illustrates a control panel and other utilities of the compartment;

35

Figure 14 is a perspective view of a section of the compartment shown in Figure 2 which illustrates bed controls of the compartment;

Figures 15 and 16 are perspective views of a

- 13 -

section of the compartment shown in Figure 2 which illustrate a cadenza of the compartment;

5 Figures 17 to 19 are perspective and side and top elevation views of a service tray of the compartment shown in Figure 2.

10 Figure 20 is a schematic diagram that illustrates another embodiment of a cabin in accordance with the present invention;

15 Figure 21 is a detailed view of part of the cabin shown in Figure 20 viewed in a different direction to that of Figure 20;

 Figure 22 is a further detailed view of another part of the cabin shown in Figure 20 viewed in a different direction to that of Figures 20 and 21;

20 Figure 23 is a top perspective view of one private passenger compartment in the cabin shown in Figure 20 in one compartment configuration;

25 Figure 24 is another top perspective view of the private passenger compartment shown in Figure 23 in another compartment configuration;

30 Figure 25 is a side view of the private passenger compartment shown in Figures 23 and 24 viewed from within the aircraft cabin;

 Figure 26 is a side view of the private passenger compartment shown in Figures 23 and 24 viewed from outside the cabin compartment;

35 Figure 27 is a perspective view of the table of the private passenger compartment shown in Figures 23 to

- 14 -

26 in an operative position;

Figures 28 to 39 are a series of perspective views of the private compartment shown in Figures 23 to 26 that illustrate a sequence of operations to transform the private passenger compartment into different configurations.

Figures 1 to 19 and 20 to 39 illustrate two embodiments of an aircraft cabin 3 that forms part of a total cabin layout of the aircraft.

In each embodiment, the cabin 3 comprises a plurality of "private" passenger compartments 5 that define multi-functional compartment spaces for passengers.

The compartments 5 of each embodiment are designed so that the compartments can be completely enclosed so that passengers can have total privacy.

The compartments 5 of each embodiment are designed particularly for long-haul flights during which the passengers occupying the compartments may wish to work, relax, or sleep.

In the embodiment shown in Figures 1 to 19 the cabin comprises 3 rows 11a, 11b, 11c of compartments 5 arranged in a length-wise extending direction of the aircraft and separated by aisles 51.

The compartments 5 of each row 11a, 11b, 11c are accessible via doorways 9 in the walls 7b, hereinafter referred to as "doorway walls 7b", that define the aisles 51.

The doorways 9 are centrally positioned in the doorway walls 7b and divide the walls 7b into two equal-

- 15 -

sized sections, one on each side of the walls 7b.

5 The two outer rows 11a, 11c of compartments 5 are positioned along opposite sides of the aircraft. The aircraft side walls 15 form outer side walls of the compartments 5. The compartments 5 in each outer row 11a, 11c also include walls 7a that extend inwardly from the aircraft side walls 15. The walls 7a form end walls of the compartments 5. The doorway walls 7b extend from the end walls 7a and form interior side walls of the compartments 5.

10 Each end wall 7a and the sections of the walls 7b that extend in opposite directions from the end walls 7b are essentially T-shaped arrangements.

15 The internal row 11b of compartments 5 comprises 2 pairs of the compartments 5 in side by side relationship. The compartments 5 in each pair have doorways 9 that open into aisles 51 on opposite sides of the internal row.

20 The compartments 5 in the internal row 11b are identical to the compartments 5 in the outer rows 11a and 11c in terms of furniture and layout save that the compartments 5 in each pair are separated by a dividing wall 7c that can be removed so that the compartments 5 can be converted from separate single compartments into a double compartment.

25 With reference to Figures 10 and 11, the dividing wall 7c comprises a top rail 69 and a retractable blind 71 housed in the top rail. Conversion of the compartment simply involves raising the blind 69 from the lowered position to the raised position.

30 The walls 7a, 7b are continuous internal walls that are 1.6 m high and therefore ensure privacy of

- 16 -

passengers in the compartments 5.

The aisles 51 are formed as curved aisles. The curved aisles contribute to the overall appearance of the cabin.

The curved aisles are formed by forming the doorway walls 7b as convex walls as viewed from the aisles 51 and by staggering positions of the compartments 5 so that the doorways 9 of the compartments 5 on opposite sides of the aisles 51 are not aligned.

More preferably the compartments 5 are staggered so that the doorways 9 of the compartments on one side of the aisles 51 face the doorway walls 7b on the other side of the aisles 51, and vice versa.

As is indicated above, forming the doorway walls 7b as curved walls as viewed from the aisles 51 means that there is additional space in these sections of the compartments 5 for housing furniture in the compartments 5. This is an advantage because it makes it possible to make more efficient use of the available space within the compartments 5.

The doorway walls 7b have windows 17 on both sides of the doorways 9. The windows 17 have retractable blinds 21 so that the passenger occupants can selectively create an open compartment which facilitates visual interaction with other compartments 5 in the cabin or a more private closed compartment 5.

Each compartment 5 comprises a sliding door assembly for closing the doorway 9.

The sliding door assembly of each compartment 5 comprises a pair of doors 23 that are mounted for sliding

- 17 -

movement between retracted positions in which the doors are located in frames (not shown) in the doorway walls 7b and closed positions in which the doors 23 extend across the doorway 9 and close the compartment 5.

5

With reference to Figure 4, each door 23 has a window 27. The arrangement of the doors 23 and the windows 17 in the doorway walls 7b is such that the windows 27 of the doors 23 overlap the windows 17 in the doorway walls 7b when the doors are in the retracted positions and thereby do not interrupt the view through the windows 17.

10

With reference to Figure 3, the sliding door assembly also includes retractable blinds 29 on the doors 23 so that the passengers can selectively create an open or a more closed private compartment. The blinds 29 are shown in a closed position in Figure 3.

15

Each private passenger compartment 5 houses an extensive range of furniture required by passengers, particularly on long-haul flights.

20

The furniture comprises a chair 31, a cadenza 33, a table assembly 35 housed in the cadenza 33, a bi-fold bed 29 stored in one of the end walls 7a, and a seat 37 located within the compartment space.

25

The furniture is designed and arranged to be interactive so that the furniture can be selectively arranged in a number of different functional configurations as may be required by passengers, particularly on long-haul flights.

30

The chair 31 is located to one side of the doorway and is positioned against the end wall 7a on that side of the doorway 9, the seat 37 is located to the other

35

- 18 -

side of the doorway 9 and is positioned against the end wall 7a on that side of the doorway, (c) the cadenza 33 is located against the wall opposite the doorway 9, (d) the table assembly 35 is housed in the cadenza 33 and is
5 movable between a storage position within the cadenza and an operative position with a table of the table assembly 35 extending horizontally into a space between the chair 31 and the seat 37, and (e) the bed 29 is foldable between a storage position in the end wall 7a (Figure 7) and a
10 horizontal sleeping position within the compartment space.

The chair 31 is multi-functional. Specifically, the chair 31 is foldable between an upright position for a person to sit in the chair and a folded down position in
15 which the chair 31 forms a support for the bed 29.

The chair 31 is specifically shaped to define a bedside table 41 when the chair is in the support position.
20

The seat 37 and the cadenza 33 also define supports for the bed 29. The cadenza 33 is positioned so that it can be moved vertically between a raised position in which the cadenza 33 is at a convenient height to be
25 accessed by a person seated in the chair 31 and a lowered position in which the cadenza 33 forms a bed support.

The above-described compartment 5 is a compact and efficient use of space by virtue of the arrangement of
30 the furniture in the compartment 5 which provides a passenger with a range of functional options for the use of the compartment 5 without the compartment appearing to be cramped.

35 By way of particular example, the construction of the chair 31 to be a foldable chair that can be used as a support for the bed 29 makes it possible to locate the

- 19 -

substantial components of a luxury chair and a bed within a relatively confined space without the compartment being a cramped space. In effect, the foldable chair 31 allows the compartment 5 to be converted from one functional configuration to another, quite separate, functional configuration within a relatively confined space.

The conversion that is made possible by the foldable chair means that the entire compartment space is available for each separate function, hence providing an impression a relatively spacious compartment.

The cabin also includes the following features:

- Wardrobes.
- Breakfast tables.
- Storage spaces and a vanity unit in the cadenza 33.
- Baby bassinet.
- Shelving.
- Control panel for lighting and entertainment system.
- Wall-mounted entertainment display screen.

With reference to Figure 9, the wardrobes 53 are in the form of wardrobe frames that are slidably mounted within the end walls 7a. As can be appreciated from the figure, the wardrobe frames are arranged for sliding movement from storage positions within the end walls 7a to access positions extending into the aisles 51. The access positions provide convenient access for passengers. Moreover, the location of the wardrobes 53 within the end walls 7a makes it possible for the wardrobes 53 to be of

- 20 -

sufficiently large size to accommodate business suits etc in a free-hanging form.

5 Figures 17 to 19 illustrate an embodiment of a service table 61 that is adapted to be positioned on the bedside table 41 of the chair 31 when the chair is in the folded down position. The service table 61 provides convenient access for a passenger in the bed 29. The service table 61 is generally U shaped and includes legs
10 63 extending from a platform 65.

 The cadenza 33 includes a series of storage compartments and an in-built vanity unit and other features, as illustrated in Figures 15 and 16.
15

 In addition, each compartment 5 includes provision for a baby bassinet 65 and storage shelving 67 within the end walls 7a of the compartment. This feature is illustrated in Figure 12.
20

 Each compartment 5 also includes a series of standard utilities, such as control units, as illustrated in Figures 13 and 14.

25 In the embodiment of the cabin shown in Figures 20 to 39, the cabin comprises 3 rows 11a, 11b, 11c of compartments 5 arranged in a length-wise extending direction of the aircraft.

30 The two outer rows 11a, 11c are positioned along opposite sides of the aircraft with the aircraft side walls 15 forming compartment walls.

 The central row 11b is positioned between and is
35 separated from the outer rows by length-wise extending aisles.

- 21 -

The positions of the compartments 5 are staggered so that the doorways 9 of the compartments 5 on opposite sides of the aisles do not directly face each other. This feature enhances the privacy of the compartments.

5

The doorway walls 7 are formed as louvered walls so that the passenger occupants can selectively create an open compartment which facilitates visual interaction with other compartments in the cabin or a more private closed compartment.

10

Each compartment 5 comprises a sliding door assembly for closing the doorway 9.

15

The sliding door assembly comprises an upper rail 51 and a curtain 55 supported by the rail.

The rail 51 is mounted for sliding movement between a retracted position in which the rail is located in the doorway wall 7 on one side of the doorway 9 and an operative, ie closed, position in which the rail 51 extends across and blocks the doorway 9.

20

The curtain 55 is arranged to fold in a concertina fashion. Accordingly, the curtain 55 folds against the doorway wall 7 when the rail 51 is slid into the retracted position and the curtain 55 expands and closes the doorway 9 when the rail 51 is in the operative position.

30

The sliding door assembly also comprises a member (not shown) on the opposite side of the doorway 9 that is adapted to retain the rail in the operative position.

35

Each private passenger compartment 5 houses basic functional furniture required by passengers, particularly on long-haul flights.

- 22 -

The furniture comprises a chair 21, a work desk 23, a table assembly 25, and a seat 27 located within the compartment space.

5

As with the previous embodiment, the furniture is designed and arranged to be interactive with each other so that the furniture can be selectively arranged in a number of different functional configurations as may be required by passengers, particularly on long-haul flights.

10

More specifically, the furniture is designed and arranged to be movable between a range of positions to re-configure the compartment space.

15

As with the previous embodiment, the configurations comprise relaxation, work, entertainment, and sleep configurations.

20

More specifically, the private compartment comprises the following combination of furniture: (a) a chair 21 in one corner of the compartment, (b) a bench seat 27 adjacent a wall opposite the chair when the chair is in a take-off position and facing in a forward travel direction of the aircraft, (c) a work desk 23 adjacent a wall that is in a lengthwise-extending direction of the aircraft, (d) a table assembly 25 movable between a storage position against the same wall as the work desk 23 and an operative position with a table of the table assembly 25 extending horizontally in a space between the chair 21 and the seat 27, and (e) a bed 29 movable between a raised storage position and a lowered operative position on the work desk.

25

30

35

The chair 21 is arranged so that it can swivel between a range of positions. For example, the chair 21 can be positioned in an aircraft take-off position so that

- 23 -

a person in the chair faces a forward travel direction of the aircraft, as shown in Figures 20, 24, and 25. In addition, the chair 21 can be positioned so that the person faces the work desk 25, as shown in Figure 22 (the rearward compartment shown in the figure).

The chair 21 is an adjustable chair, with a chair back, seat and foot-rest that can be placed in a range of positions to meet passenger requirements. The chair may be of a conventional construction.

Figure 27 shows the table assembly 25 in an operative position.

With reference particularly to Figure 27, the table assembly 25 comprises a table 33 that has a central panel and two side wings 35 that can be folded onto the central panel.

The table assembly 25 also comprises a base member 41 that, when mounted in a compartment, is supported for sliding movement between the storage position adjacent the compartment side wall and the operative position between the chair 21 and the seat 27. The base member 41 is in the form of a straight-sided rectangular cabinet that defines a storage compartment. The base member 41 is supported for sliding movement in a compartment by a track assembly, identified in part by the rail 43 mounted to and extending rearwardly from the base member.

The table assembly 25 also comprises a support arm 37 that interconnects the table 33 and the base member 41 and facilitates moving the table 33 from the storage position to the operative position.

The support arm 37 is pivotally mounted at a

- 24 -

lower end to a forward part of an upper section of the base member 41.

5 The support arm 37 is also pivotally mounted at an upper end to an underside of the table 33. The support arm 37 is foldable between a storage position in which the support arm 37 (and the table 33) lies flat on top of the base member 41 and an operative position in which the support arm 37 is angled forwardly (as shown in Figures 27 and 29).

10 The support arm 37 is coupled to the base member 41 so that it can not pivot forward beyond the operative position shown in Figures 27 and 29.

15 The support arm 37 comprises a V-shaped channel member 45 near the upper end thereof which acts as a support element for the table 33 and supports an underside of the table 33 when the table assembly is in the operative position with the table 33 in the horizontal position.

20 The above-described table assembly 25 can be moved from the storage position to the operative position by sliding the base member 41 outwardly from the storage position, lifting the table 33 upwardly and inwardly into the compartment space and thereby pivoting the support arm 37 upwardly and inwardly into the compartment space until the table 33 is in the horizontal operative position.

30 As is indicated above, the compartment is multi-functional and the basic furniture can be positioned in a range of configurations. This feature is illustrated, by way of example, in Figures 28 to 39.

35 Figure 28 illustrates one configuration of the private passenger compartment 5. In this configuration

- 25 -

the table assembly 25 is in the operative position in which the table 33 of the table assembly 25 is in an unfolded position in a space between the chair 21 and the seat 27. In this configuration the compartment is multi-functional and can be used for a range of purposes. For example, the table assembly 25 can be used as a meals table for supporting one or more meals delivered to the compartment to be eaten by the single passenger occupant of the compartment or the passenger and a "visiting" passenger. Alternatively, the table assembly 25 can be used as a work desk by the single passenger or the passenger and a "visiting" passenger.

Figure 29 illustrates a first step to transform the compartment from the configuration shown in Figure 28 to an alternative configuration.

In the first step shown in Figure 29 the wings 35 of the table 33 are folded inwardly onto the central panel of the table 33.

With reference to Figures 30 and 31, in a second step the table 33 is lifted upwardly and outwardly (in relation to the interior of the compartment space) toward the aircraft side wall 15 to pivot the table 33 and the support arm 37 into the folded position shown in Figure 12 in which the table 33 and the support arm 37 overlies and are supported by the base member 41.

Thereafter, the base member 41 of the table assembly 25 is slid from the operative position shown in Figure 31, in which the base member extends into the space between the chair 23 and the seat 27, and the storage position shown in Figure 32, in which the base member 41 is located against the aircraft side wall 15.

The final step in the transformation sequence

- 26 -

involves sliding a cover member 61 over the stored table assembly 25 to provide a flat working surface.

5 In the configuration shown in Figure 33 the compartment is multi-functional. By way of example, the single passenger occupant may be seated in the chair 23 or on the seat 27 and relax or work, as required. When seated on the chair 23 the passenger may conveniently view the visual display screen 45.

10

Figure 34 illustrates an intermediate position of the bed 29 in a first step to transform the configuration shown in Figure 33 to a "sleeping" configuration.

15

This step comprises lowering the bed 29 from the raised position shown in Figure 14 to the lowered position shown in Figure 35.

20

Figure 35 illustrates the bed 29 supported by the work desk 23 in the lowered position of the bed.

25

Figure 36 illustrates the compartment in the sleeping configuration with a person on the bed 29 and the visual display screen 45 pivoted to a position in which the person on the bed can view the screen while in a reclining position.

30

Figure 37 illustrates a first step to transform the compartment from the "sleeping" configuration shown in Figure 17 to a "working" configuration.

35

The first step involves swiveling the chair 23 from the forward position shown in Figure 36 to a working position shown in Figure 37 in which a person seated in the chair is facing towards the aircraft side wall 15.

Figure 38 illustrates a subsequent step of

- 27 -

raising the bed 29 from the lowered position to the raised position shown in the figure. This step enables access to the work desk 23.

5 The work desk 23 is vertically adjustable so that a person seated in the chair 23 can adjust the height as required to suit personal preferences.

 Figure 38 illustrates the work desk in one raised
10 position and Figure 39 illustrates the work desk in a lowered position.

 Many modifications may be made to the embodiments of the cabin and the private passenger compartment
15 described above with departing from the spirit and scope of the invention.

 By way of example, whilst the embodiments of the cabin comprise 3 rows 11a, 11b, 11c of private passenger
20 compartments separated by aisles 51, the invention is not so limited and extends to any suitable arrangement of the compartments 5.

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AN AIRCRAFT CABIN

CLAIMS:

- 5 1. An aircraft cabin that comprises a plurality of
"private" passenger compartments for passengers during an
aircraft flight, with each compartment comprising walls
that define a compartment space and being accessible via a
doorway in one of the walls, and with each compartment at
10 least comprising a chair for a passenger.
2. The cabin defined in claim 1 wherein the
compartment walls are at least 1.5 m high.
- 15 3. The cabin defined in claim 2 wherein the
compartment walls are at least 1.6 m high.
4. The cabin defined in any one of the preceding
claims comprises at least 3 rows of the compartments
20 extending in a length-wise extending direction of the
aircraft, with adjacent rows being separated by length-
wise extending aisles, and with: (a) two outer rows being
positioned along opposite sides of the aircraft with the
aircraft side walls forming compartment walls, and (b) at
25 least one internal row being positioned between the outer
rows and separated from at least one outer row by a said
length-wise extending aisle.
5. The cabin defined in claim 4 wherein the doorway
30 walls define the aisles and the compartments are
accessible from the aisles via the doorways.
6. The cabin defined in claim 4 or claim 5 wherein
the doorways divide the doorway walls into two sections,
35 with one section on each side of each doorway.
7. The cabin defined in claim 6 wherein the doorways

- 29 -

are positioned centrally in the doorway walls.

8. The cabin defined in any one of claims 4 to 7 wherein the aisles are curved along the length thereof.

5

9. The cabin defined in claim 8 wherein the curved aisles are formed by forming the doorway walls as curved walls and by positioning the compartments so that the doorways of the compartments on opposite sides of the aisles are not aligned.

10

10. The cabin defined in claim 9 wherein the compartments are positioned so that the doorways of the compartments on one side of the aisles face the doorway walls on the other side of the aisles, and vice versa.

15

11. The cabin defined in any one of claims 4 to 10 wherein the walls that form the two outer rows of the compartments comprise (a) the aircraft side walls, (b) walls that extend inwardly from the aircraft side walls, and (c) the doorway walls.

20

12. The cabin defined in any one of claims 4 to 11 wherein the or each interior row of the compartments comprises a plurality of pairs of length-wise extending compartments, with the doorways of the compartments of each pair providing access to the compartments from aisles on opposite sides of the interior row.

25

13. The cabin defined in claim 12 wherein the compartments of at least one pair of compartments is separated by a length-wise extending wall that is a removable wall, whereby the pair of compartments may be converted into a double compartment by removing the removable wall.

30

35

14. The cabin defined in claim 13 wherein each

- 30 -

compartment of the at least one of the pair of compartments comprises single beds that can be moved from storage positions to sleep positions that are in side-by-side relationship when the compartment is converted into the double compartment so as to form a double bed.

15. The cabin defined in any one of claims 4 to 14 comprises a plurality of wardrobes in walls of the compartments that separate adjacent compartments in the rows of compartments.

16. The cabin defined in claim 15 wherein the wardrobes include wardrobes that are mounted for sliding movement between storage positions in the walls and operative positions in which the wardrobes extend into the aisles and are accessible from the aisles.

17. The cabin defined in any one of the preceding claims wherein each compartment includes doors for the doorways so that the compartments can be completely enclosed spaced when the doors are closed.

18. A private passenger compartment for a passenger during an aircraft flight that comprises walls that define a compartment space, a doorway in one of the walls that enables access to the compartment from an aisle, and a chair and other basic furniture located in the compartment space in an interactive way so that the furniture can be selectively arranged in a number of different configurations.

19. The compartment defined in claim 18 wherein the compartment walls are at least 1.5 m high.

20. The compartment defined in claim 19 wherein the compartment walls are at least 1.6 m high.

- 31 -

21. The compartment defined in any one of claims 18 to 20 wherein the doorway divides the doorway wall into two sections, with one section on each side of the doorway.

5

22. The compartment defined in claim 21 wherein the doorway is positioned centrally in the doorway wall.

23. The compartment defined in claim 21 or claim 22 wherein the sections of the doorway wall are curved, for example by being convex as viewed from the aisle, so that the compartment is wider in these sections of the compartment than in the region of the doorway.

24. The compartment defined in claim 23 wherein the doorway wall includes at least one window.

25. The compartment defined in claim 24 wherein the doorway wall includes at least two windows, with at least one window in each section of the doorway wall.

26. The compartment defined in claim 25 wherein the windows include retractable blinds that can be closed.

27. The compartment defined in any one of claims 18 to 26 includes a door assembly for closing the doorway.

28. The compartment defined in claim 27 wherein the door assembly comprises a door mounted for sliding movement from a retracted position within the doorway wall to a closed position in which the door extends across the doorway and closes the compartment.

29. The compartment defined in claim 28 wherein the door assembly comprises a pair of doors mounted for sliding movement inwardly towards each other from retracted positions within the sections of the doorway

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walls that are on opposite sides of the doorway.

30. The compartment defined in any one of claim 29 wherein the doors include transparent windows that are
5 positioned so that the view through the windows in the doorway walls is not obscured by the doors when the doors are in the retracted positions.

31. The compartment defined in claim 30 wherein the
10 doors include retractable blinds that can be closed when the doors are in the closed positions.

32. The compartment defined in claim 27 wherein the door assembly comprises an upper rail and a curtain
15 supported by the rail.

33. The compartment defined in claim 32 wherein the rail is mounted for sliding movement between a retracted position within the doorway wall and an operative, ie
20 closed, position in which the rail extends across the doorway.

34. The compartment defined in claim 33 wherein the curtain is adapted to fold in a concertina fashion so that
25 (a) the curtain folds against the doorway wall when the rail is slid into the retracted position and (b) the curtain expands and closes the doorway when the rail is in the operative position.

30 35. The compartment defined in any one of claims 18 to 34 wherein the configurations of the compartment comprise relaxation, work, and sleep configurations.

36. The compartment defined in any one of claims 18
35 to 35 wherein, in addition to the chair, the other basic furniture of the compartment comprises any one or more of a table assembly, a cadenza that houses the table assembly

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when the table assembly is in a folded position, a seat, and a bed.

37. The compartment defined in claim 36 wherein the bed is foldable from a storage position in one of the compartment walls to a sleep position within the compartment.

38. The compartment defined in claim 37 wherein the chair is foldable from an operative position in which a person can sit upright in the chair to an inoperative position in which the folded chair defines a support for the bed when the bed is in the sleep position.

39. The compartment defined in claim 38 wherein the chair defines a bedside table when the chair is in the inoperative position.

40. The compartment defined in any one of claims 37 to 39 wherein the seat is adapted to define a support for the bed when the bed is in the sleep position.

41. The compartment defined in any one of claims 37 to 40 wherein the cadenza is adapted to define a support for the bed when the bed is in the sleep position.

42. The compartment defined in claim 41 wherein the cadenza is movable from a raised operative position in which the cadenza can be accessed conveniently by a passenger seated in the chair to a lowered bed support position.

43. The compartment defined in any one of claims 36 to 42 wherein the table assembly is housed in the cadenza so that it can be moved, for example by being swivelled, from a stored position within the cadenza to an operative position with a table of the table assembly extending

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horizontally into the compartment proximate the chair.

44. The compartment defined in any one of claims 36 to 42 wherein an interactive combination of the furniture in the compartment space comprises: (a) the chair to one side of the doorway, (b) the seat to the other side of the doorway, (c) the cadenza against the wall opposite the doorway, and (d) the table assembly housed in the cadenza and movable between a stored position within the cadenza and an operative position with a table of the table assembly extending horizontally into a space between the chair and the seat.

45. The compartment defined in any one of claims 18 to 35 wherein, in addition to the chair, the other basic furniture of the compartment comprises any one or more of a work desk, a table assembly, a seat, a bed and a visual display system of an entertainment system.

46. The compartment defined in claim 45 wherein an interactive combination of the basic furniture in the compartment space comprises: (a) the chair in one corner of the compartment space, (b) the work desk along at least a part of one wall of the compartment and proximate the chair, (c) the table assembly movable between a stored position adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

47. The compartment defined in claim 46 comprises the bed movable between a raised storage position and a lowered sleep position on the work desk.

48. The compartment defined in claim 46 or 47 comprises the seat adjacent at least a part of one wall of the compartment.

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49. The compartment defined in any one of claims 46 to 48 wherein the work desk and the seat are positioned adjacent different walls of the compartment.

5 50. The compartment defined in claim 45 wherein an interactive combination of the basic furniture in the compartment space comprises: (a) the chair in one corner of the compartment space, (b) the seat adjacent one wall of the compartment, (c) the table assembly movable between
10 a stored position adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

51. The compartment defined in claim 45 wherein an
15 interactive combination of the basic furniture in the compartment space comprises: (a) the chair in one corner of the compartment space, (b) the bed movable between a raised storage position and a lowered sleep position, (c) the table assembly movable between a stored position
20 adjacent one wall of the compartment and an operative position with a table of the table assembly extending horizontally proximate the chair.

52. The compartment defined in claim 45 wherein an
25 interactive combination of the basic furniture in the compartment space comprises: (a) the chair in one corner of the compartment space, (b) the seat adjacent a an wall opposite the chair when the chair is in a take-off position, (c) the work desk adjacent a wall that is in a
30 lengthwise-extending direction of the aircraft, (d) the table assembly movable between a stored position adjacent the same wall as the work desk and an operative position with a table of the table assembly extending horizontally in a space between the chair and the seat, and (e) the bed
35 movable between a raised storage position and a lowered sleep position on the work desk.

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53. The compartment defined in claim 52 wherein the work desk and the table assembly are located adjacent the wall that is opposite the wall that defines the doorway.

5 54. The compartment defined in claim 53 wherein the work desk defines a support platform for the bed and supports the bed when the bed is in the sleep position.

10 55. The compartment defined in claims 54 wherein the bed is stored in the raised position in the compartment space and is moveable down to the lowered sleep position on the platform and is supported by the platform in the lowered position.

15 56. The compartment defined in any one of claims 52 to 55 wherein the work desk and the table assembly are positioned in relation to the chair when the table assembly is in the operative position so that the chair can be swiveled between positions facing the work desk and
20 the table assembly.

57. The compartment defined in any one of claims 52 to 56 wherein a work platform of the work desk is vertically adjustable to accommodate different
25 requirements of different passengers.

58. The compartment defined in claim 57 wherein the stored position of the table assembly is adjacent the work desk.
30

59. The compartment defined in claim 57 wherein the stored position of the table assembly is within the space occupied by the work desk.

35 60. The compartment defined in any one of claims 52 to 59 wherein the table assembly comprises: (a) a base member that can slide between the stored position adjacent

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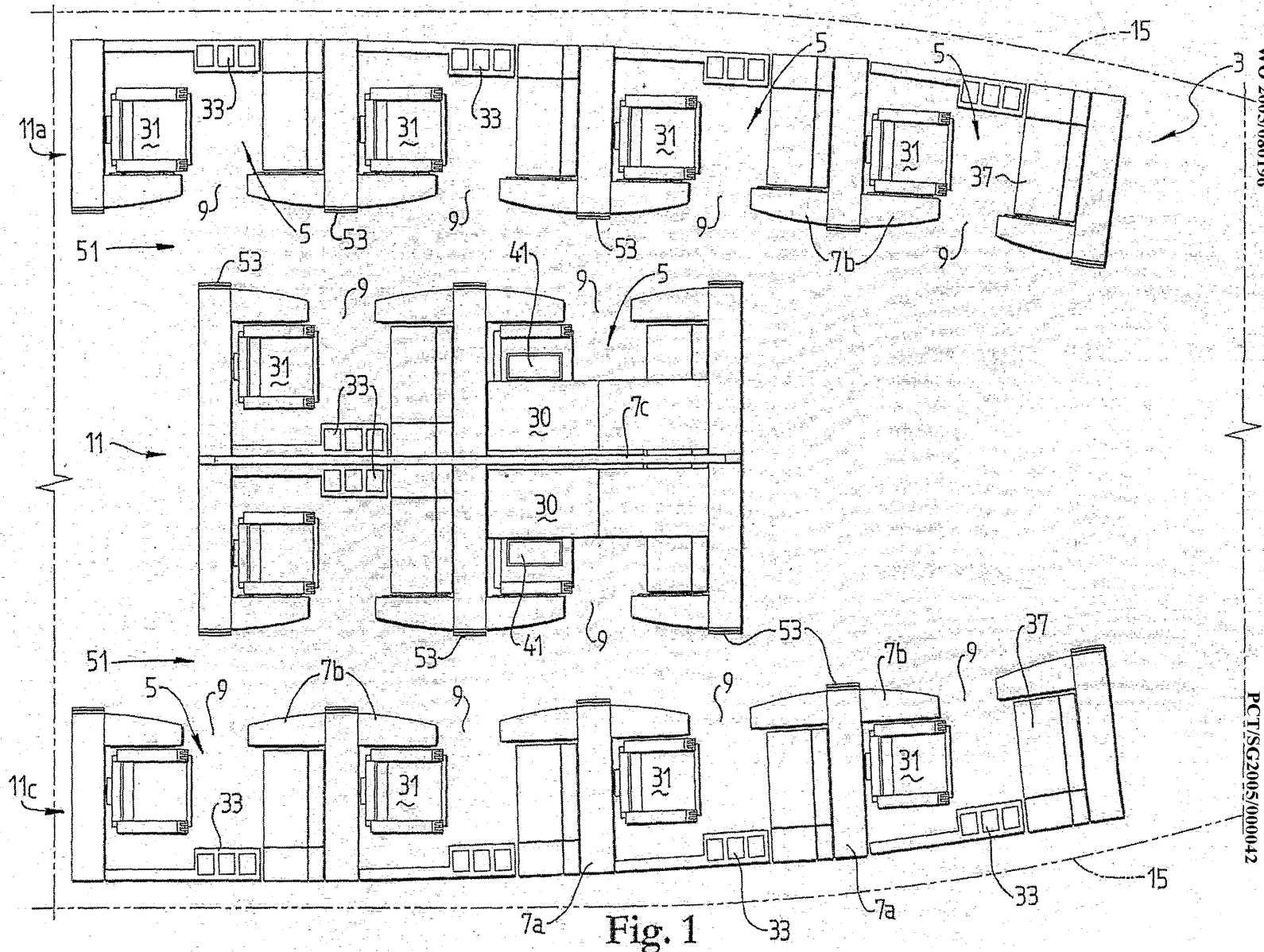
the side wall and the operative position between the chair and the seat, (b) a support arm pivotally mounted to the base member and foldable between the storage position and the operative position, and (c) a table pivotally mounted to the support arm.

61. The compartment defined in claim 60 wherein the table assembly can be moved from the stored position to the operative position by sliding or otherwise moving the base member outwardly from the stored position, lifting the table upwardly and inwardly into the compartment space and thereby pivoting the support arm upwardly and inwardly into the compartment space until the table is in the horizontal operative position.

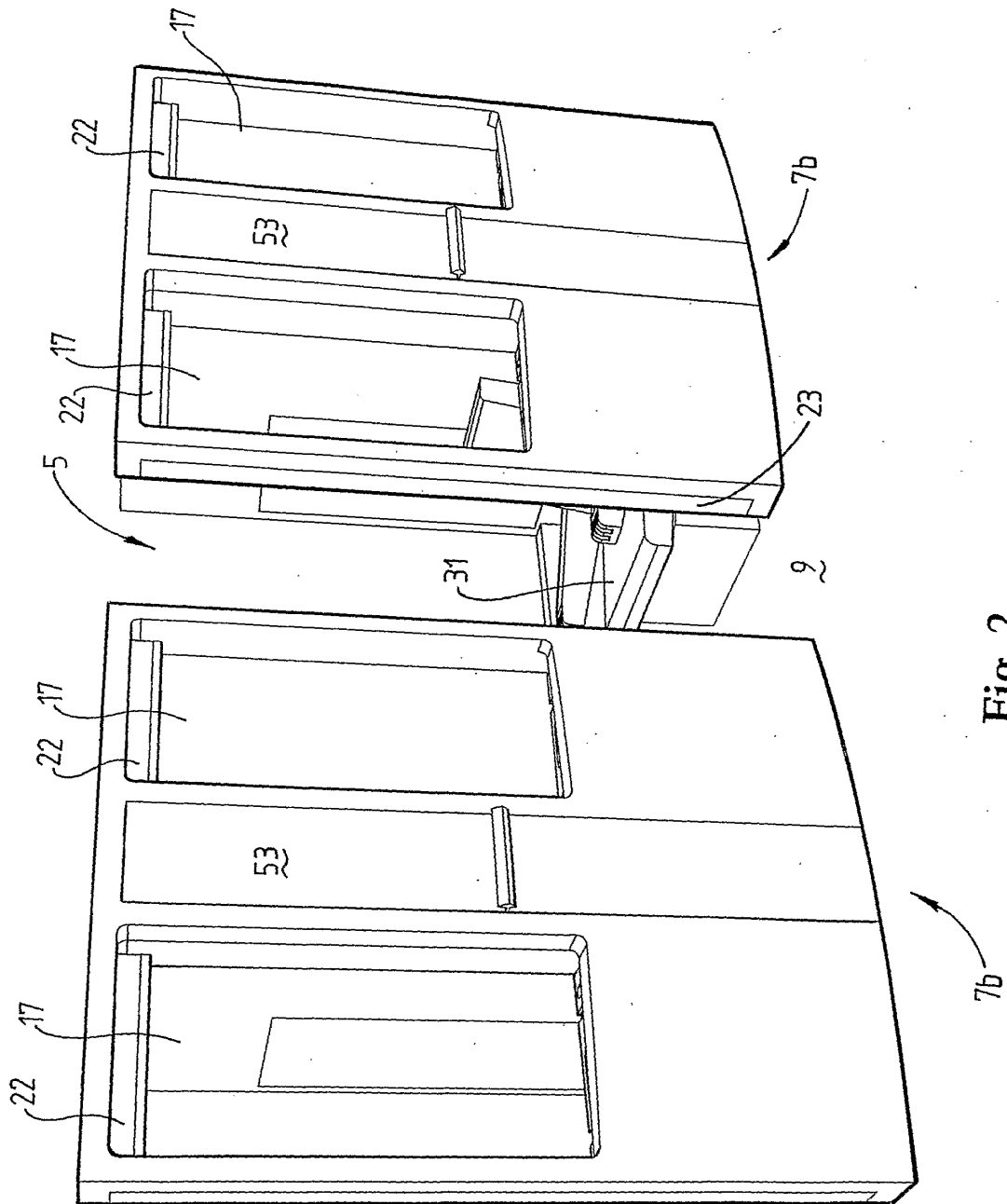
62. The compartment defined in claim 61 wherein the support arm comprises a table support element that is positioned to support an underside of the table when the table assembly is the operative position with the table in the horizontal position.

63. The compartment defined in claim 62 wherein the table comprises side wings that can be folded between an inward storage position and an outward operative position.

64. The compartment defined in claim 63 wherein the base member defines a storage compartment.



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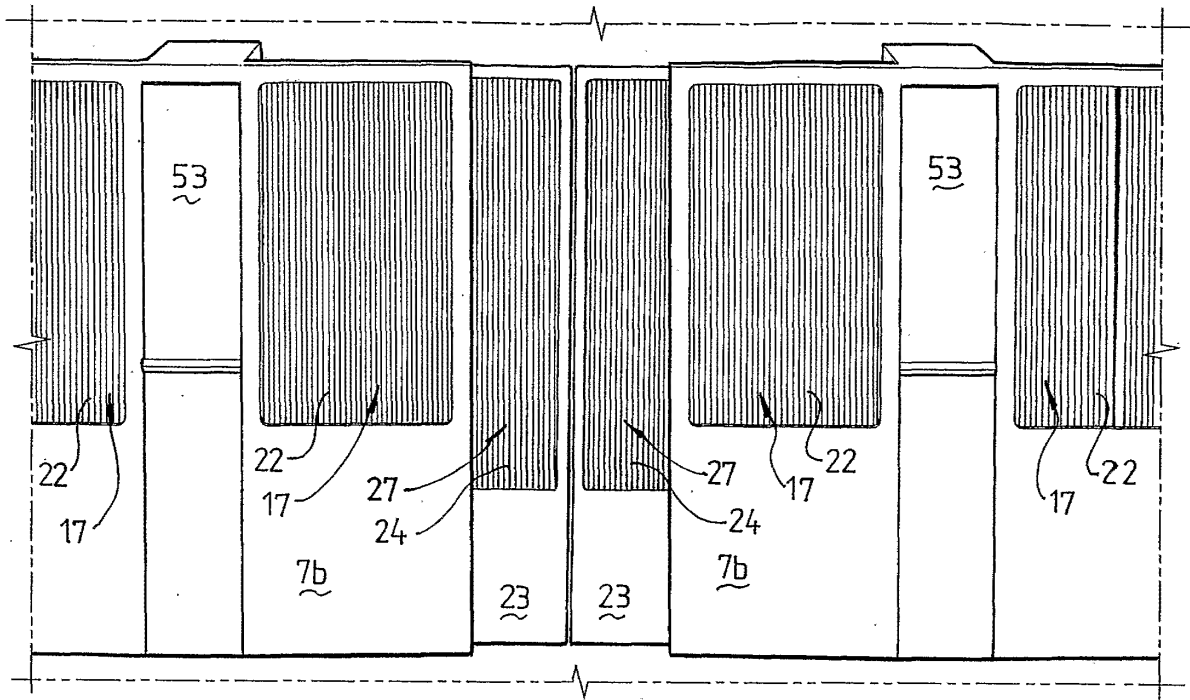


Fig. 3

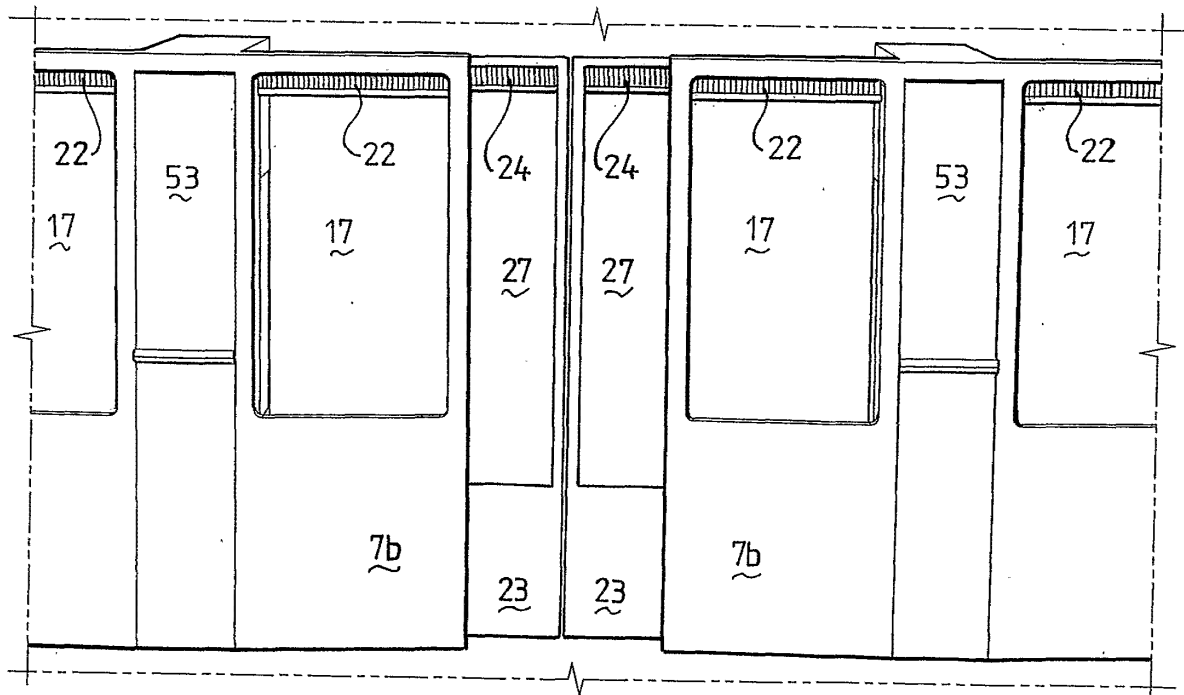
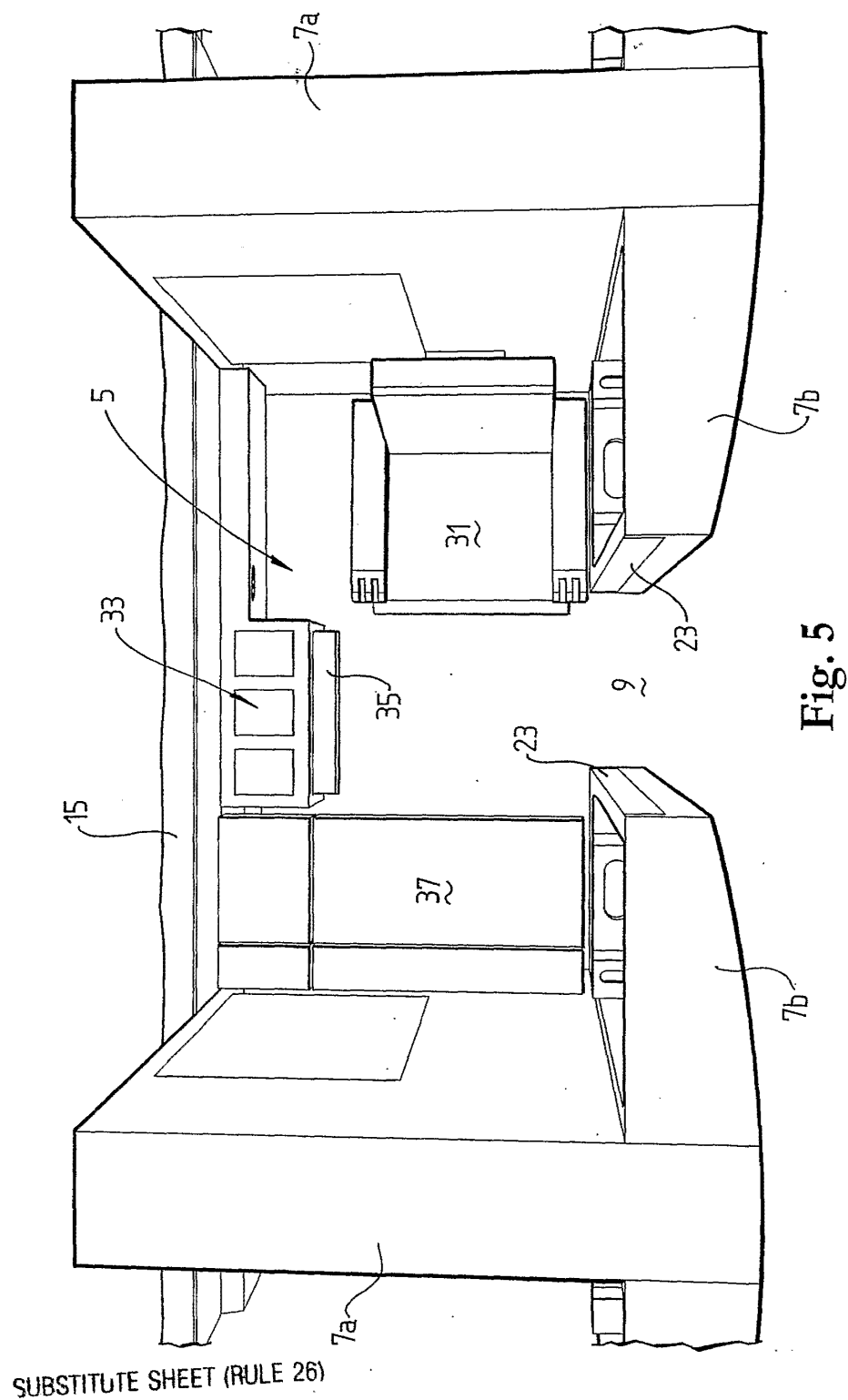


Fig. 4 SUBSTITUTE SHEET (RULE 26)

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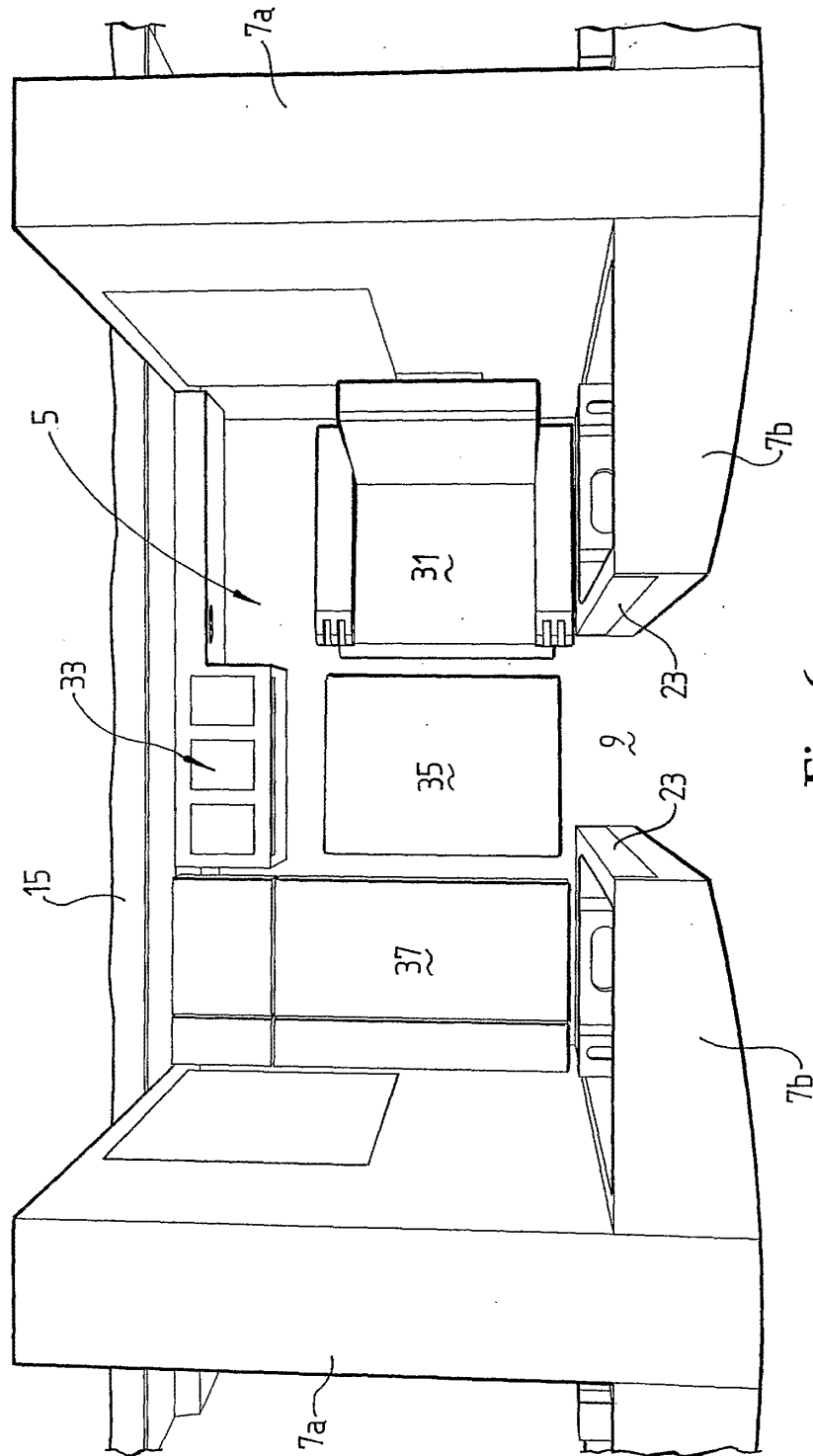


Fig. 6

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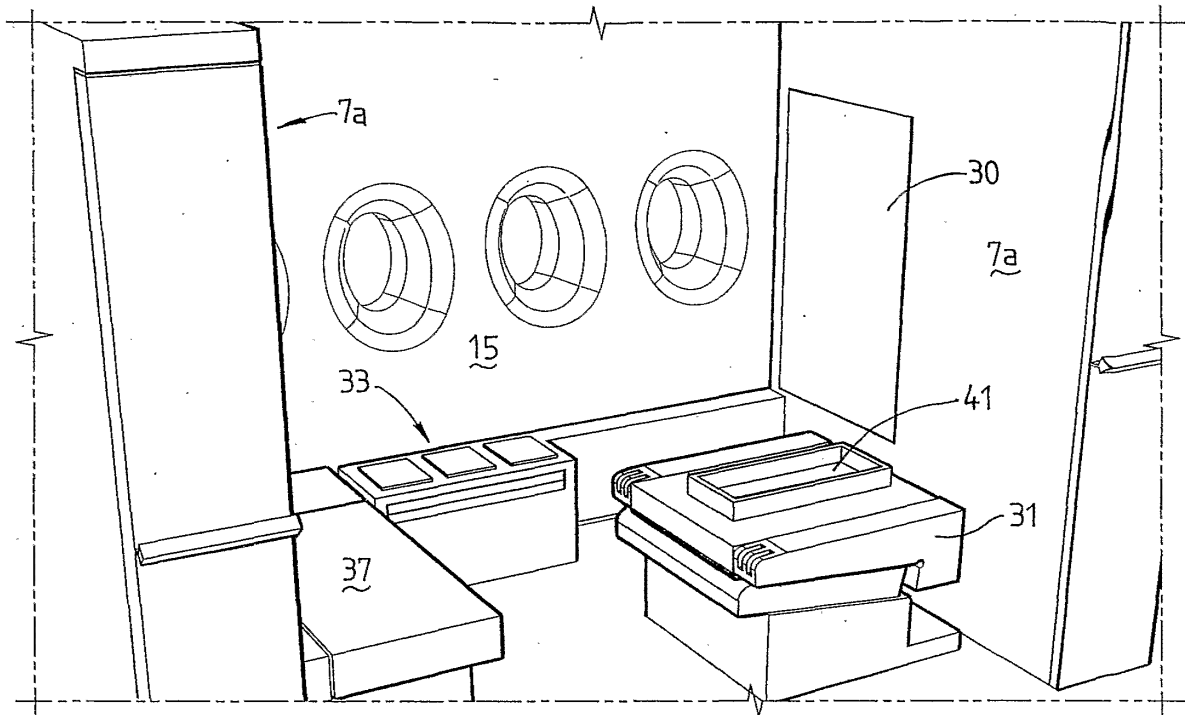


Fig. 7

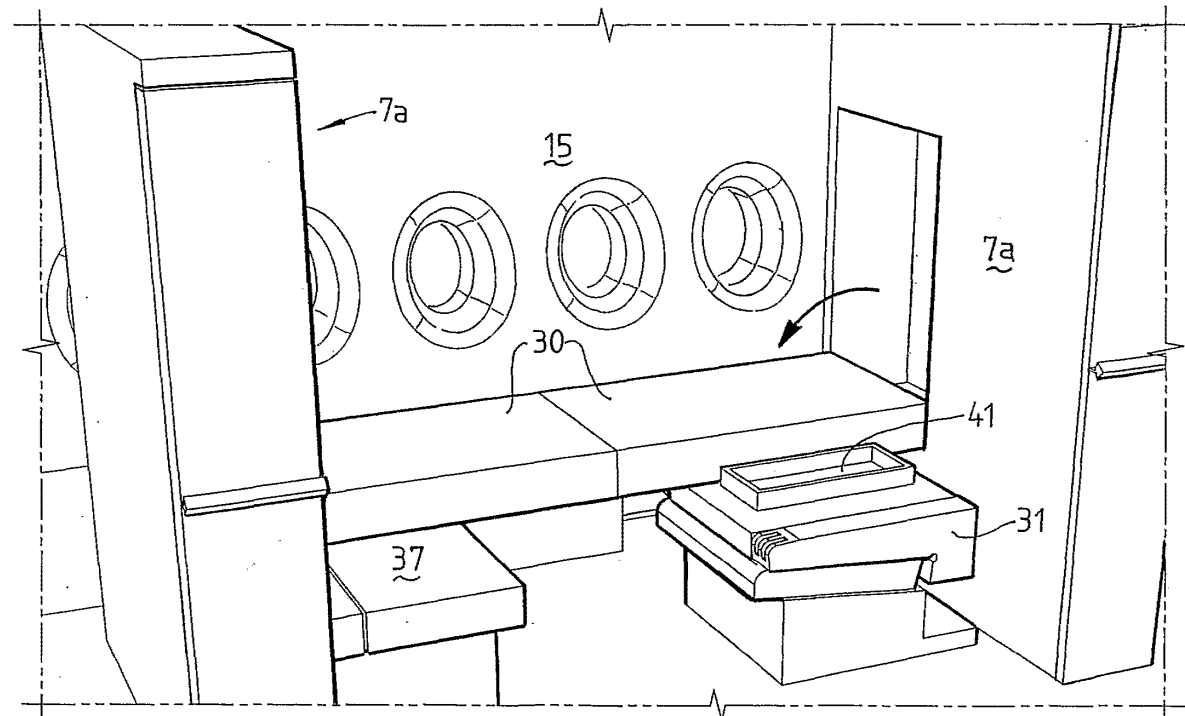


Fig. 8

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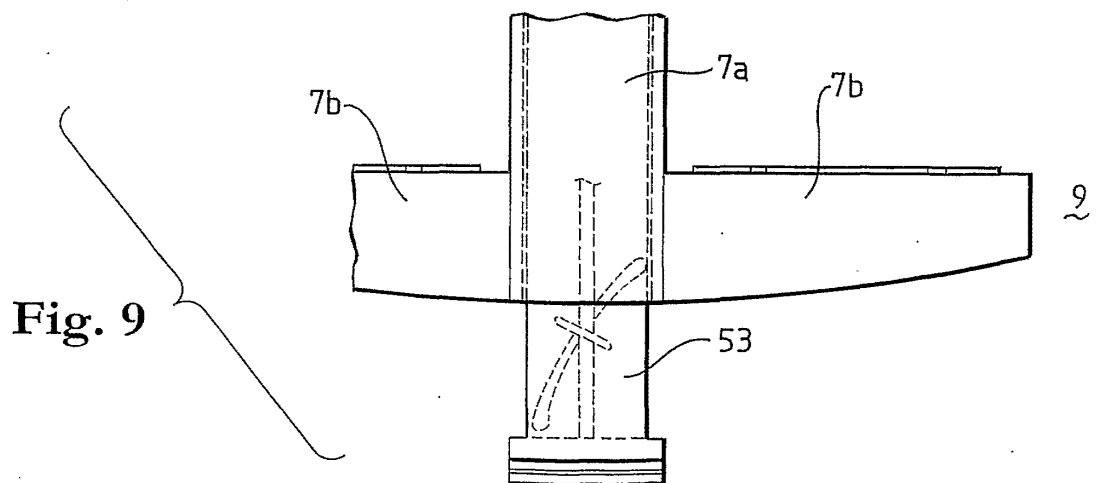
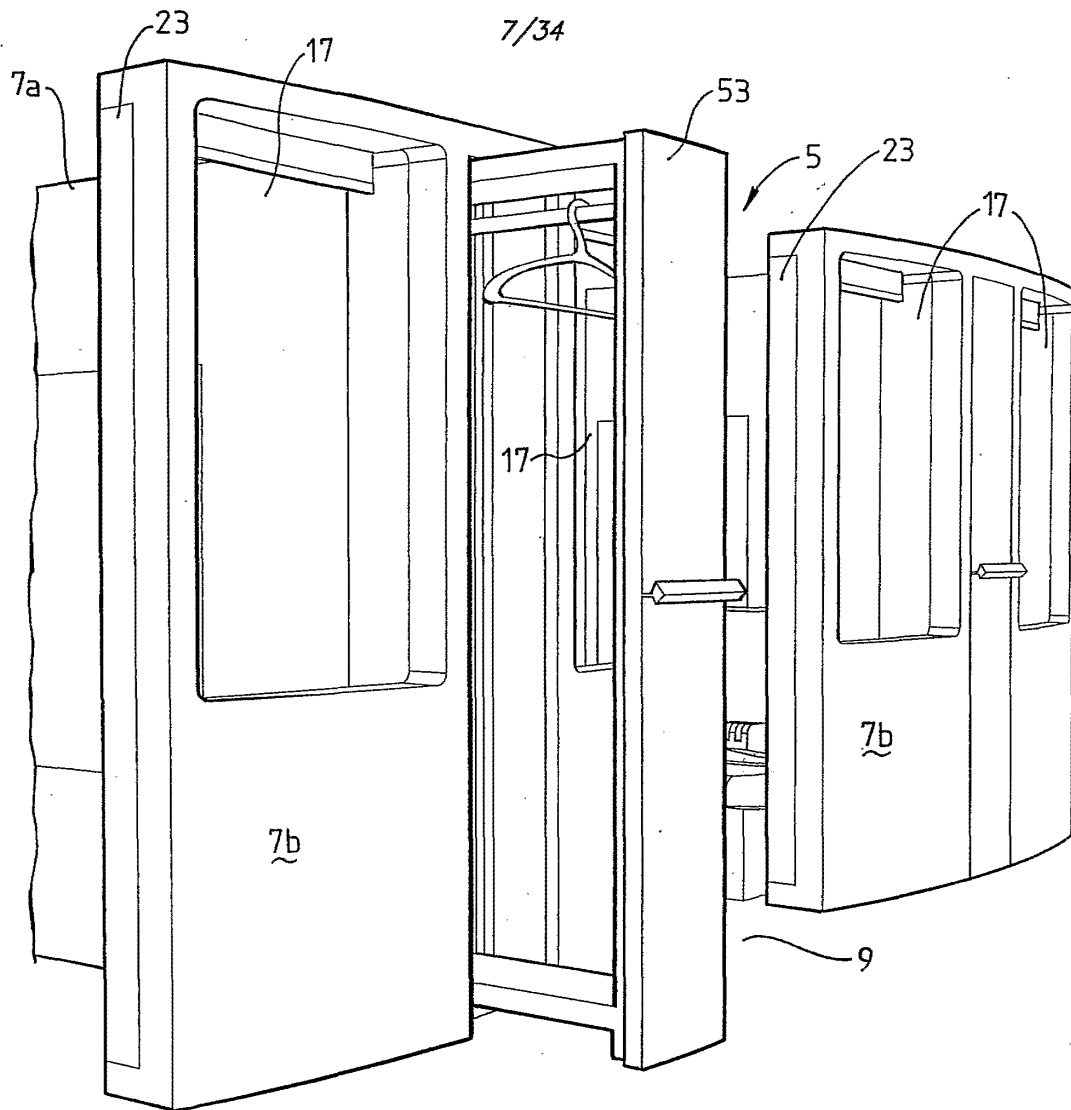


Fig. 9

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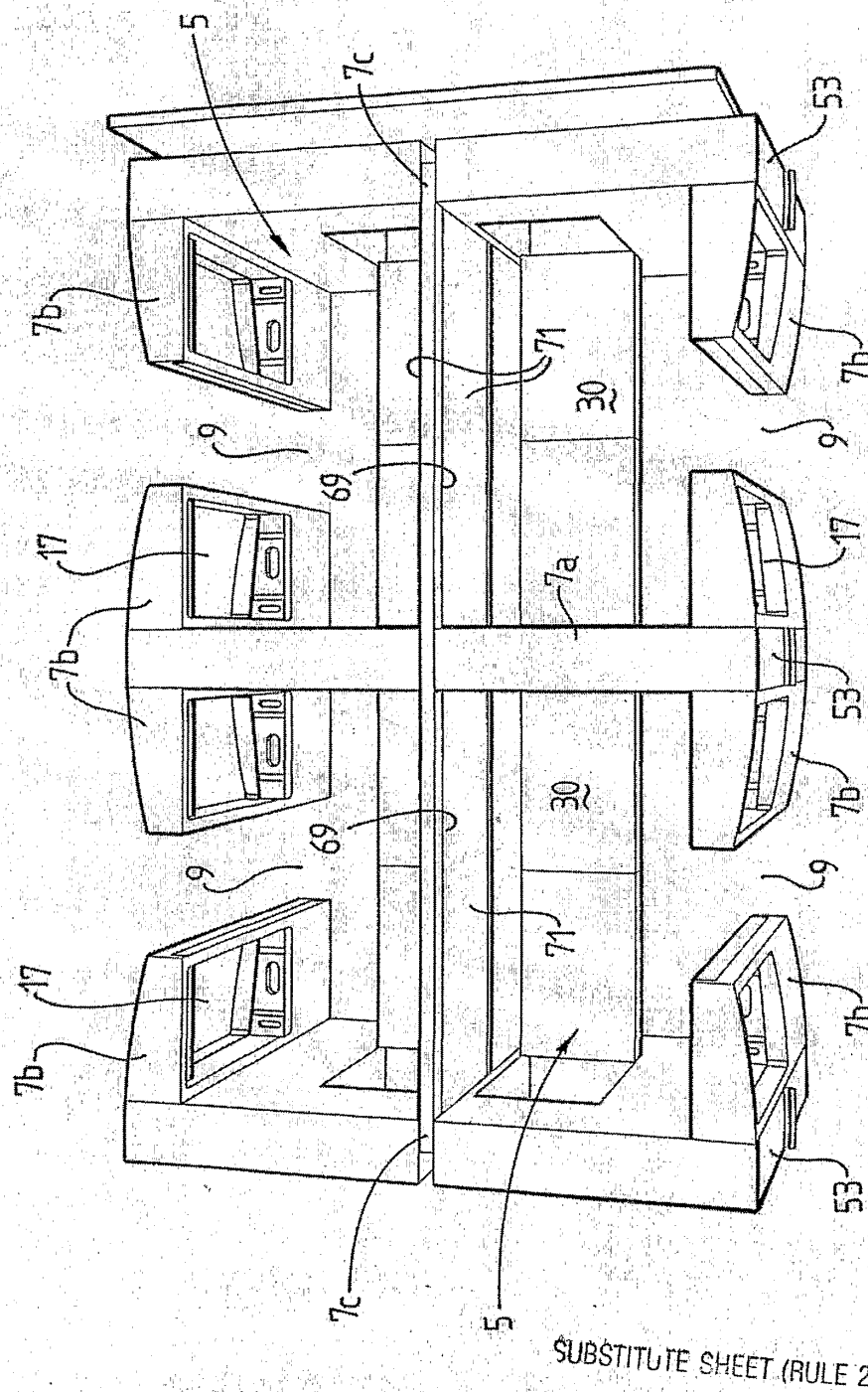


Fig. 10

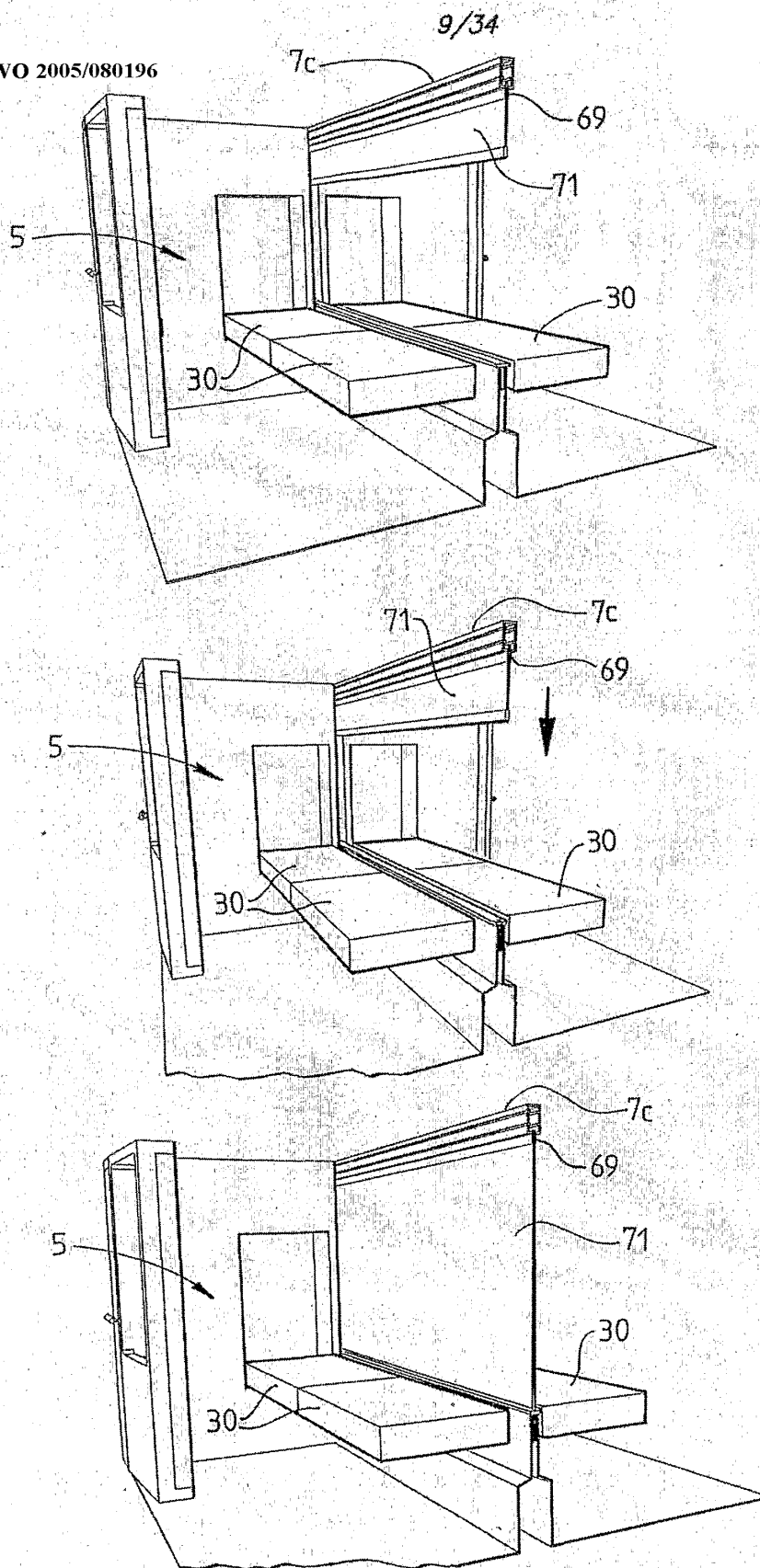


Fig. 11

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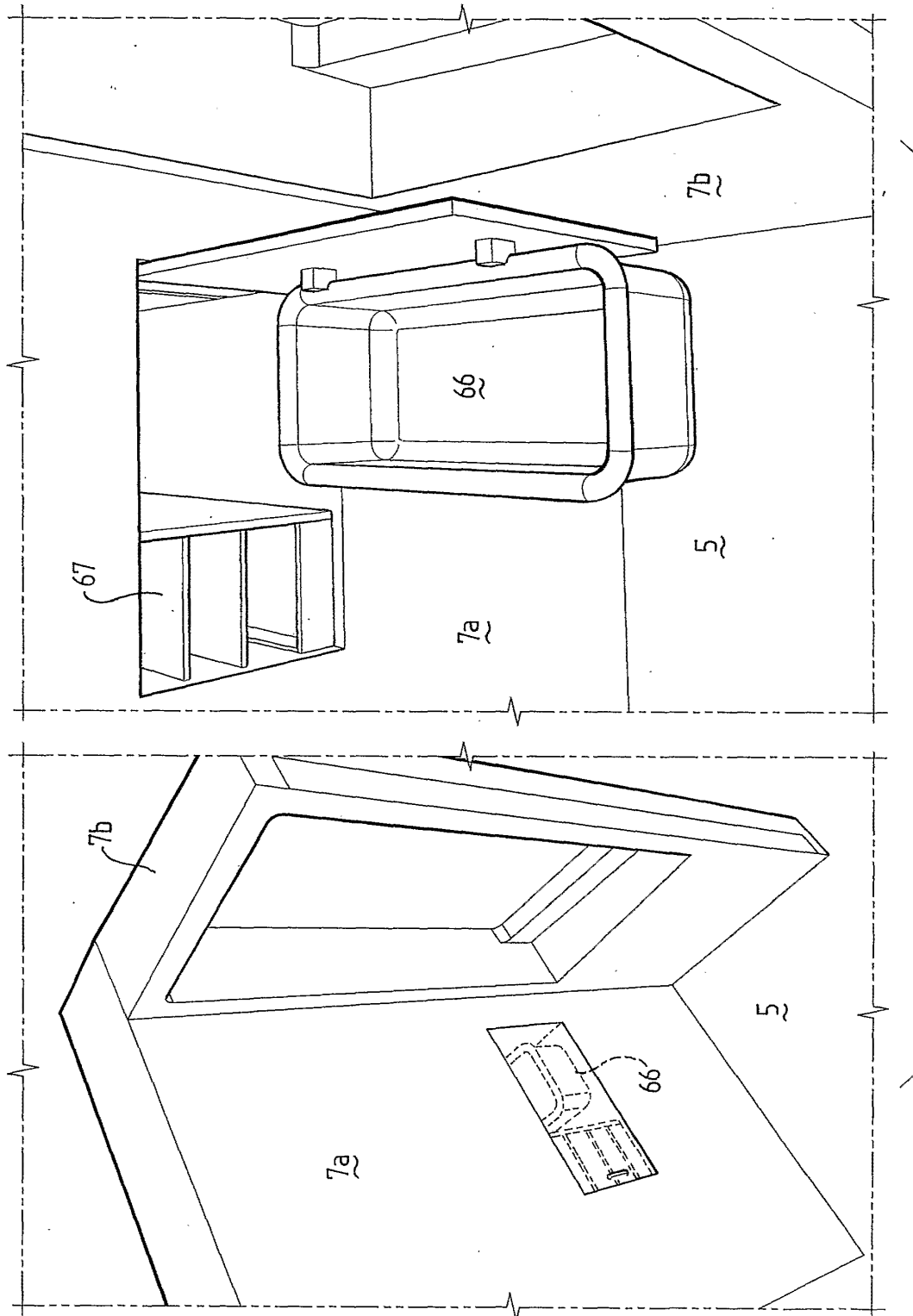


Fig. 12

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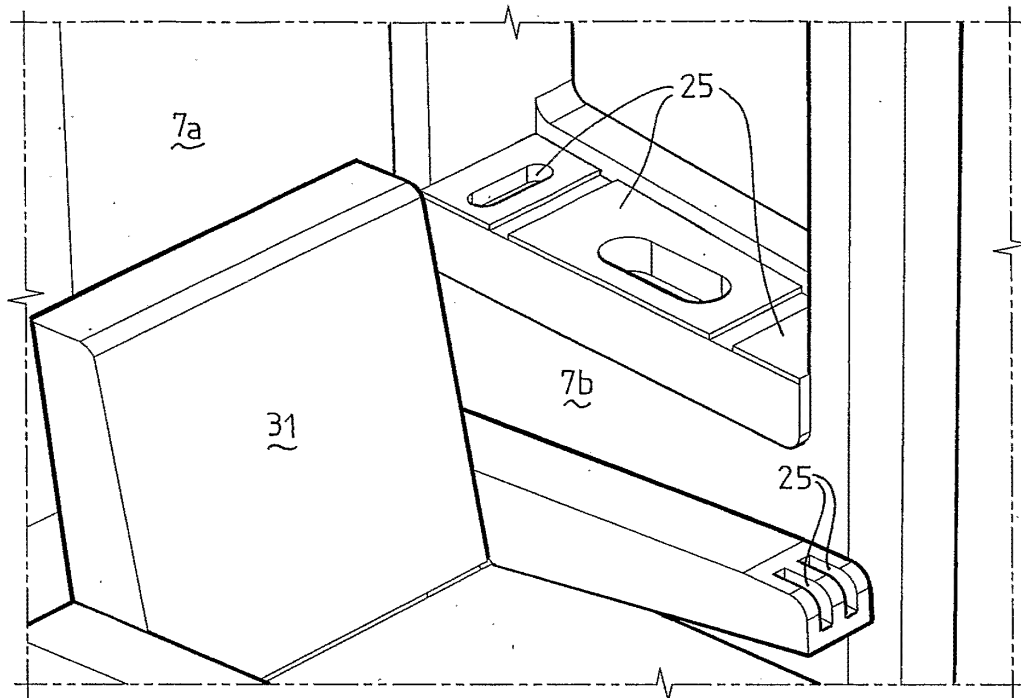


Fig. 13

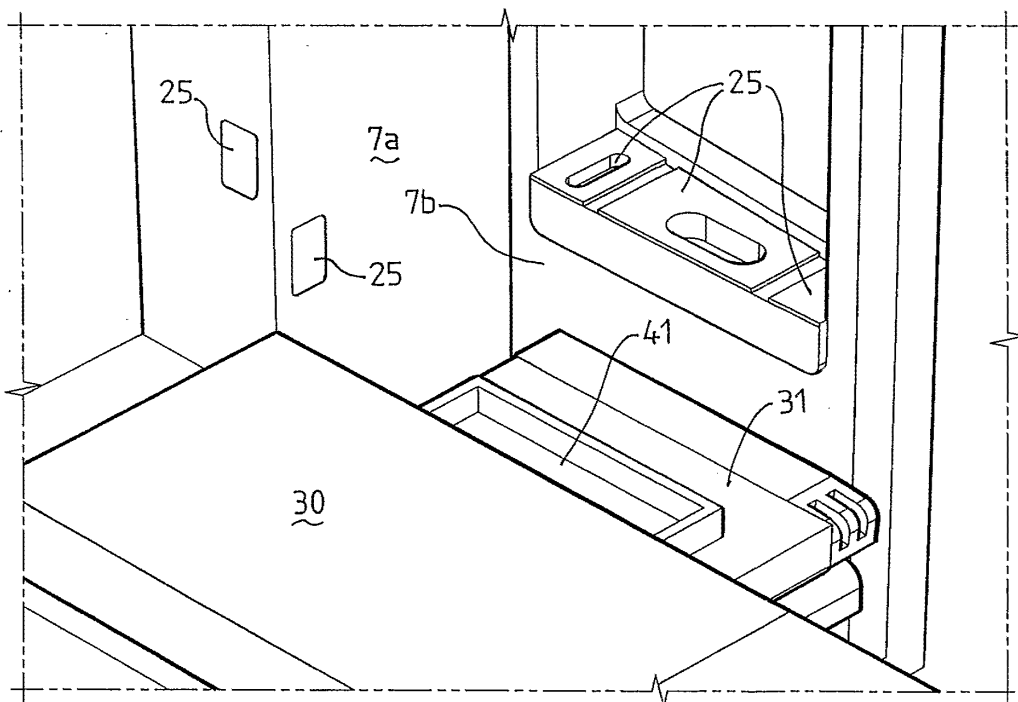


Fig. 14

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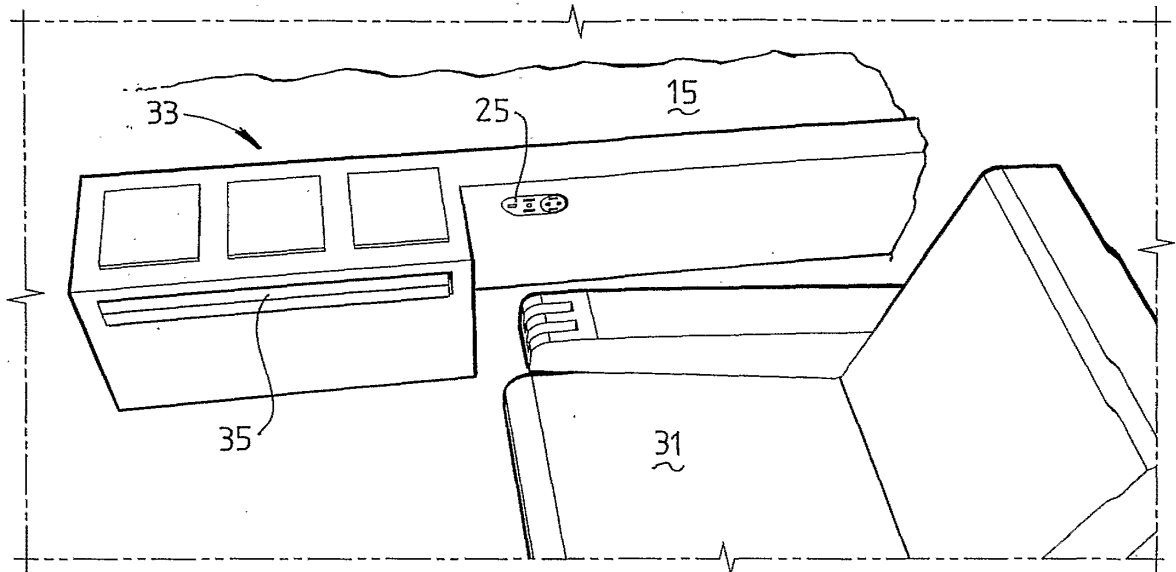


Fig. 15

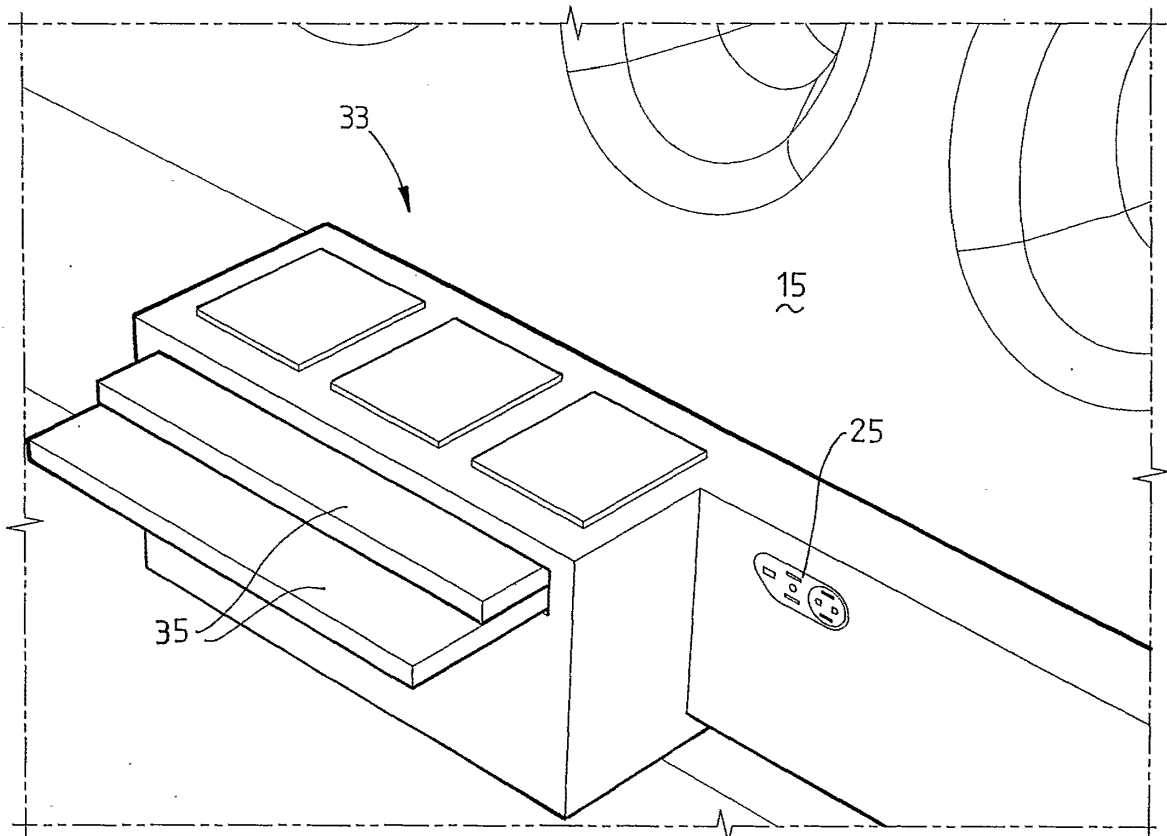


Fig. 16

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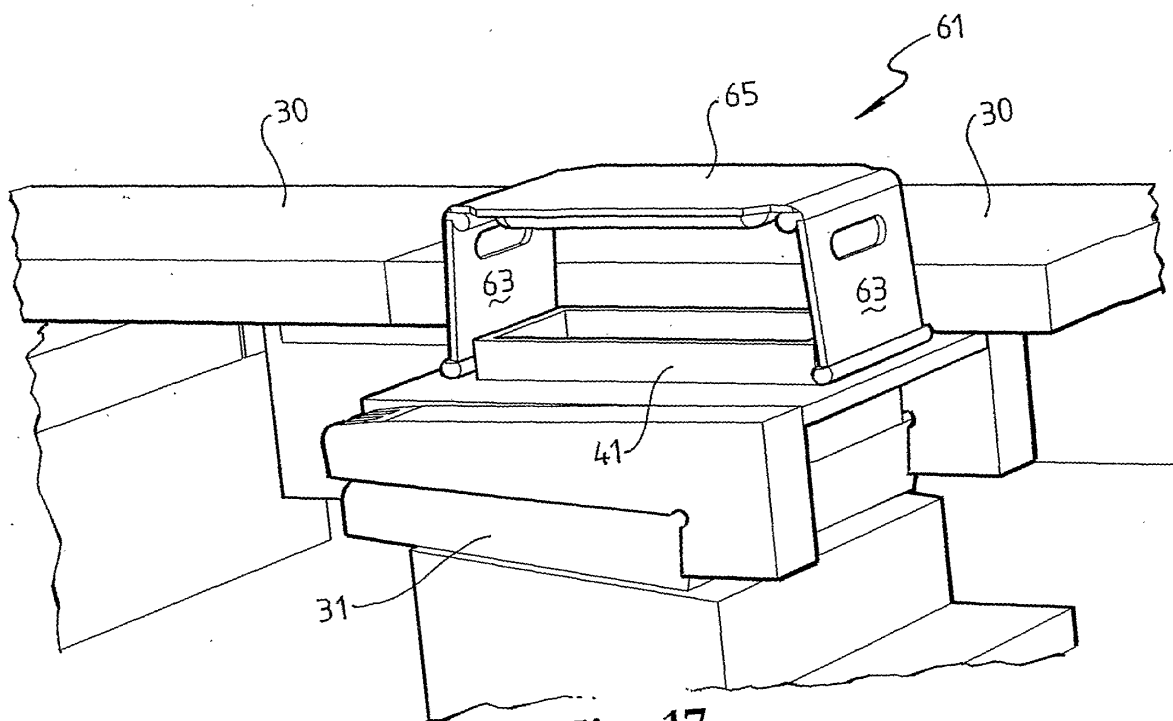


Fig. 17

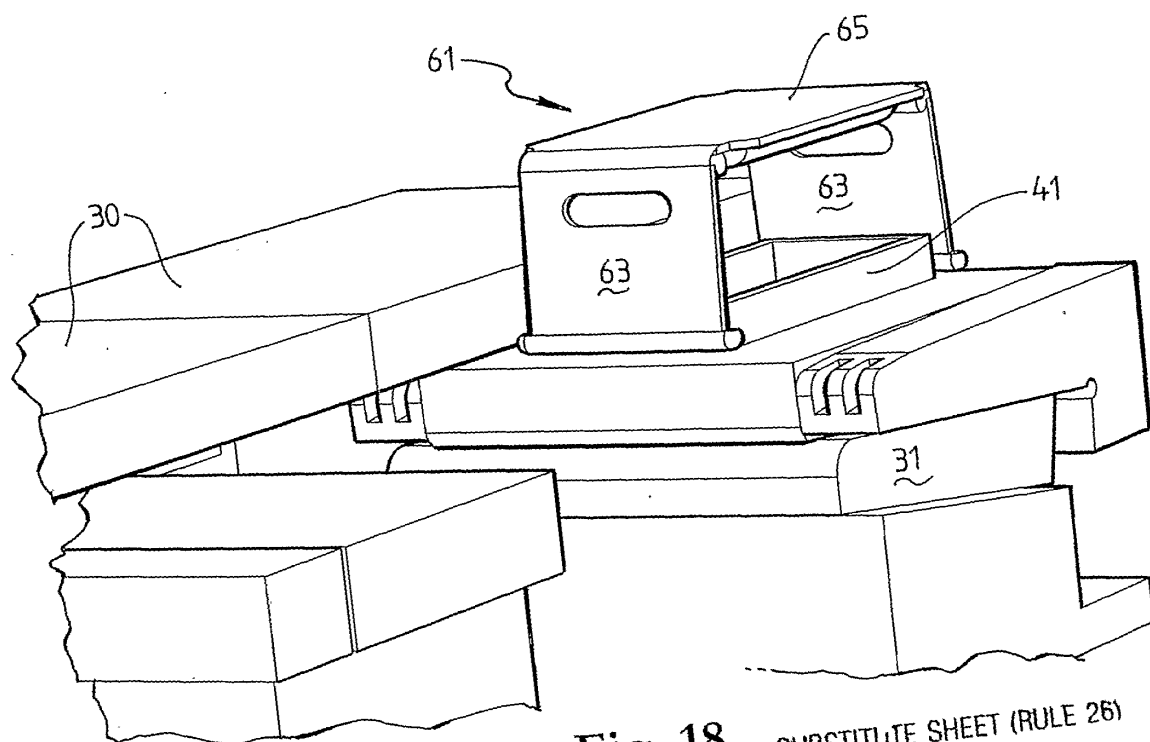


Fig. 18

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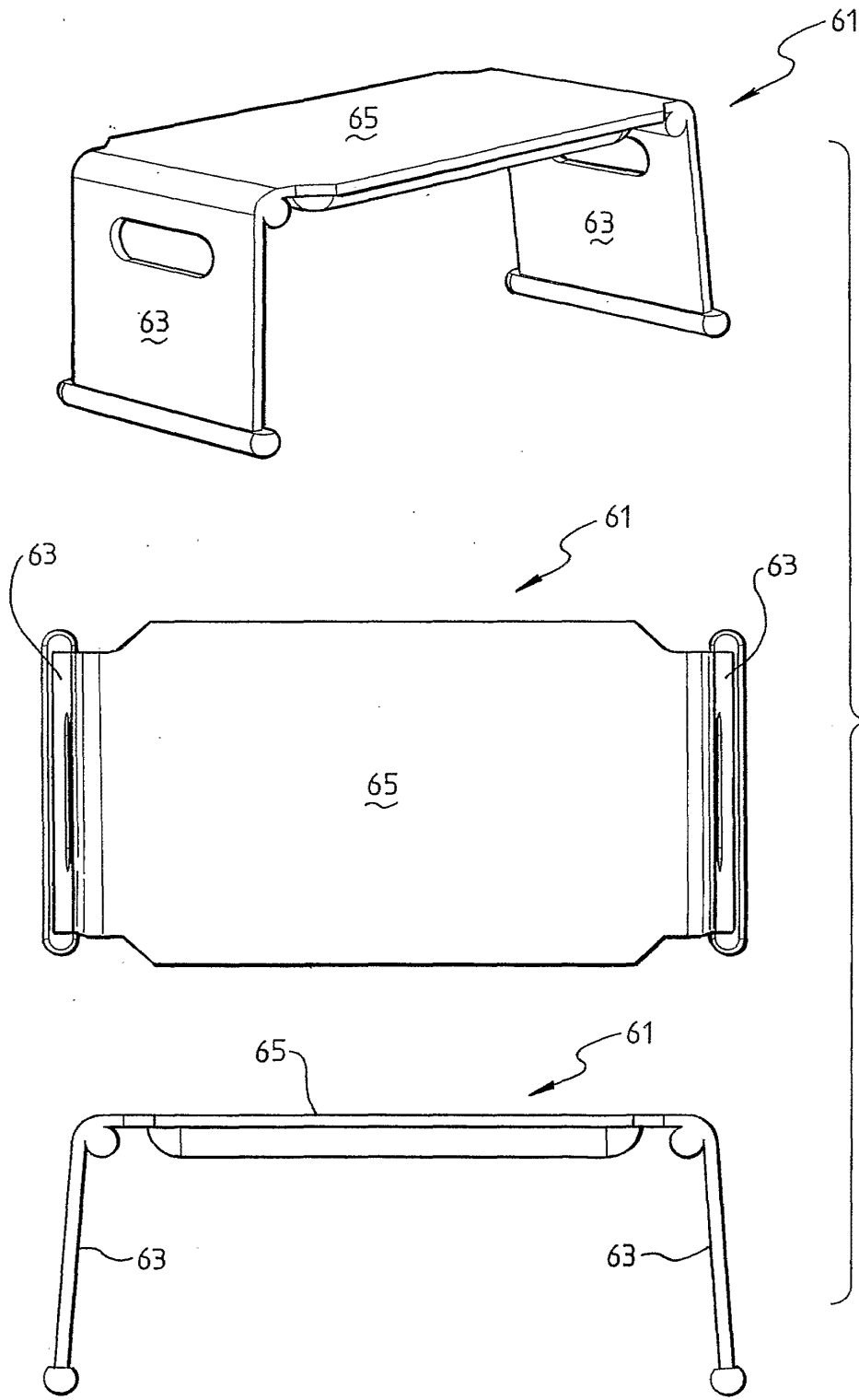


Fig. 19

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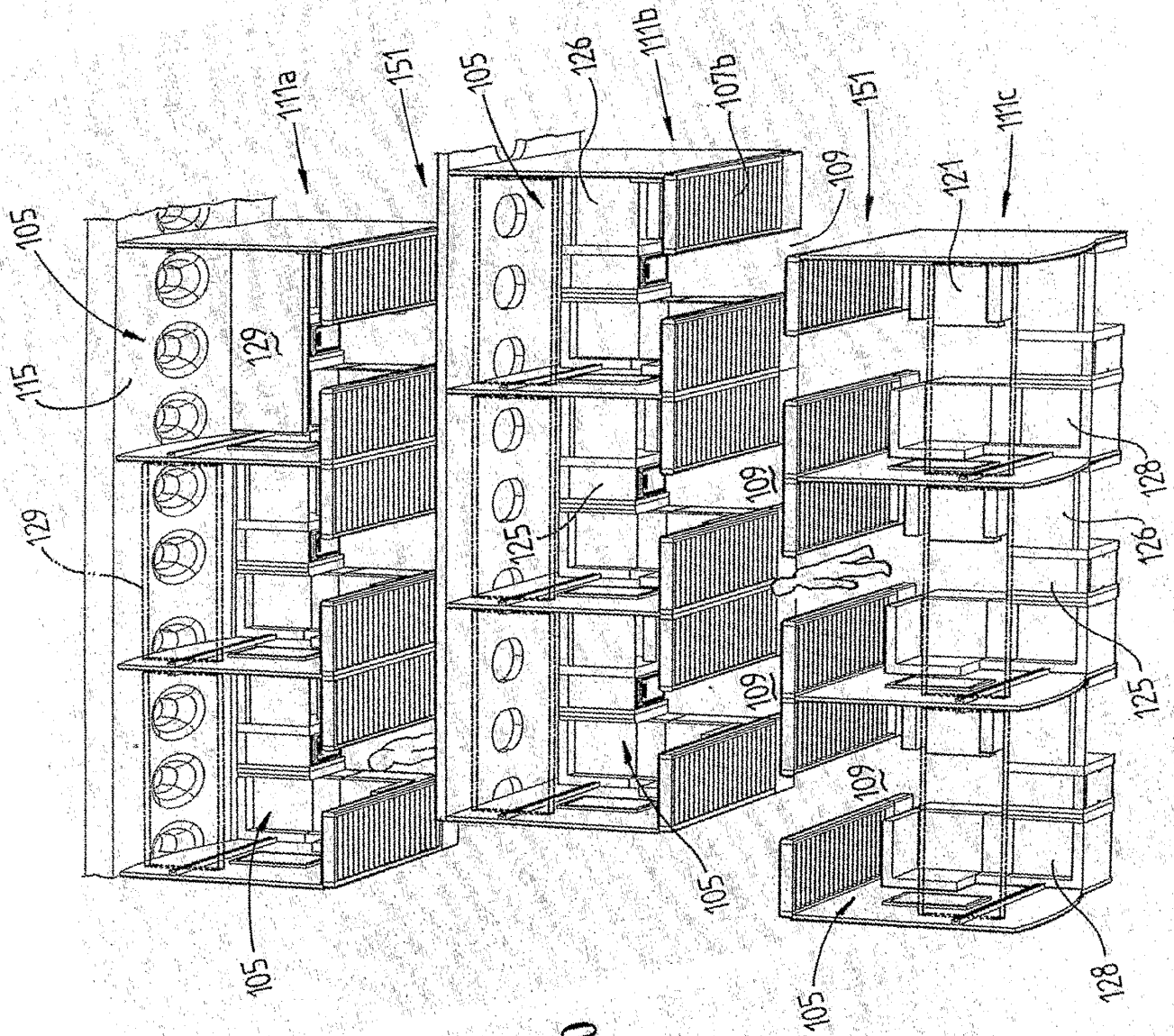
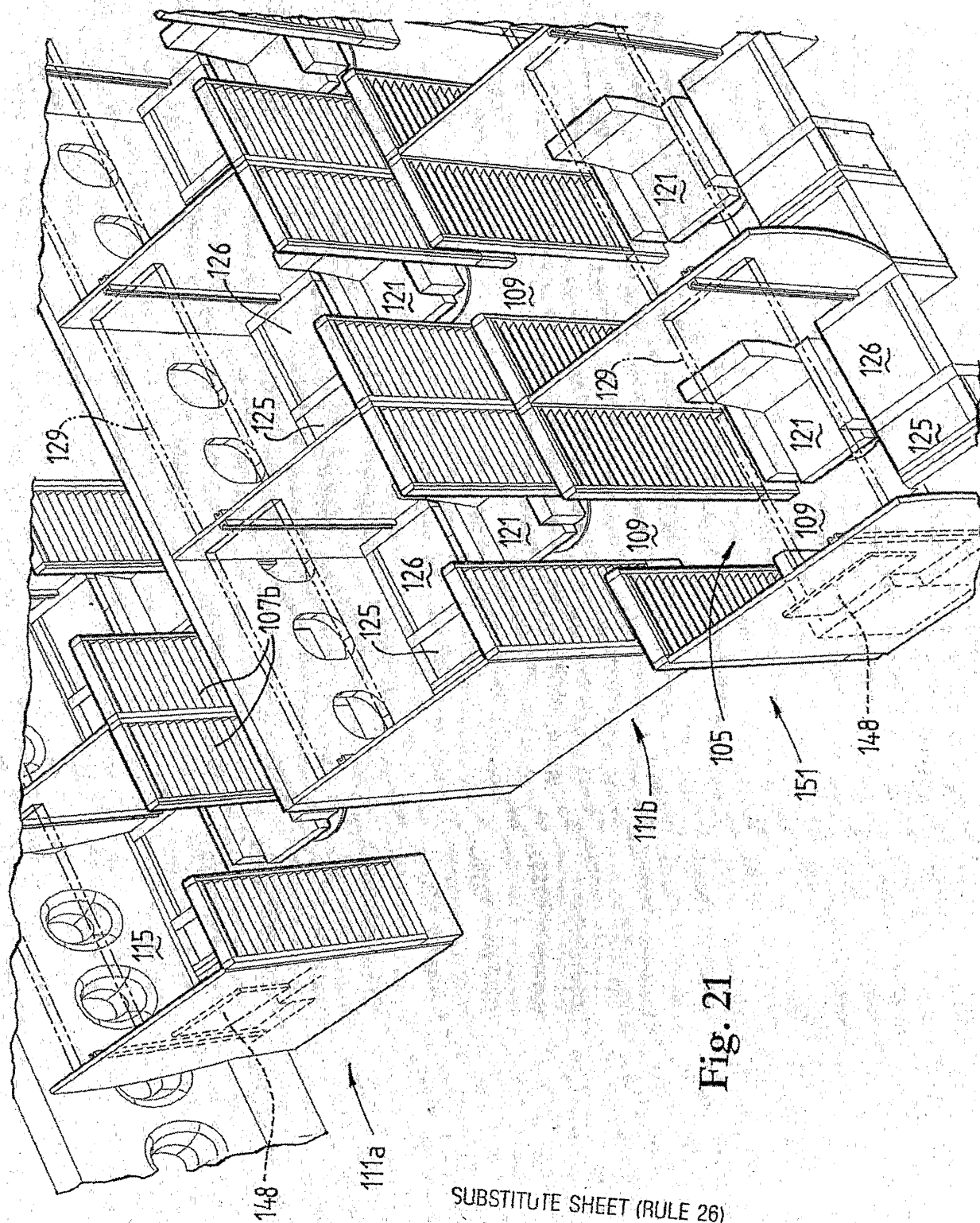


Fig. 20

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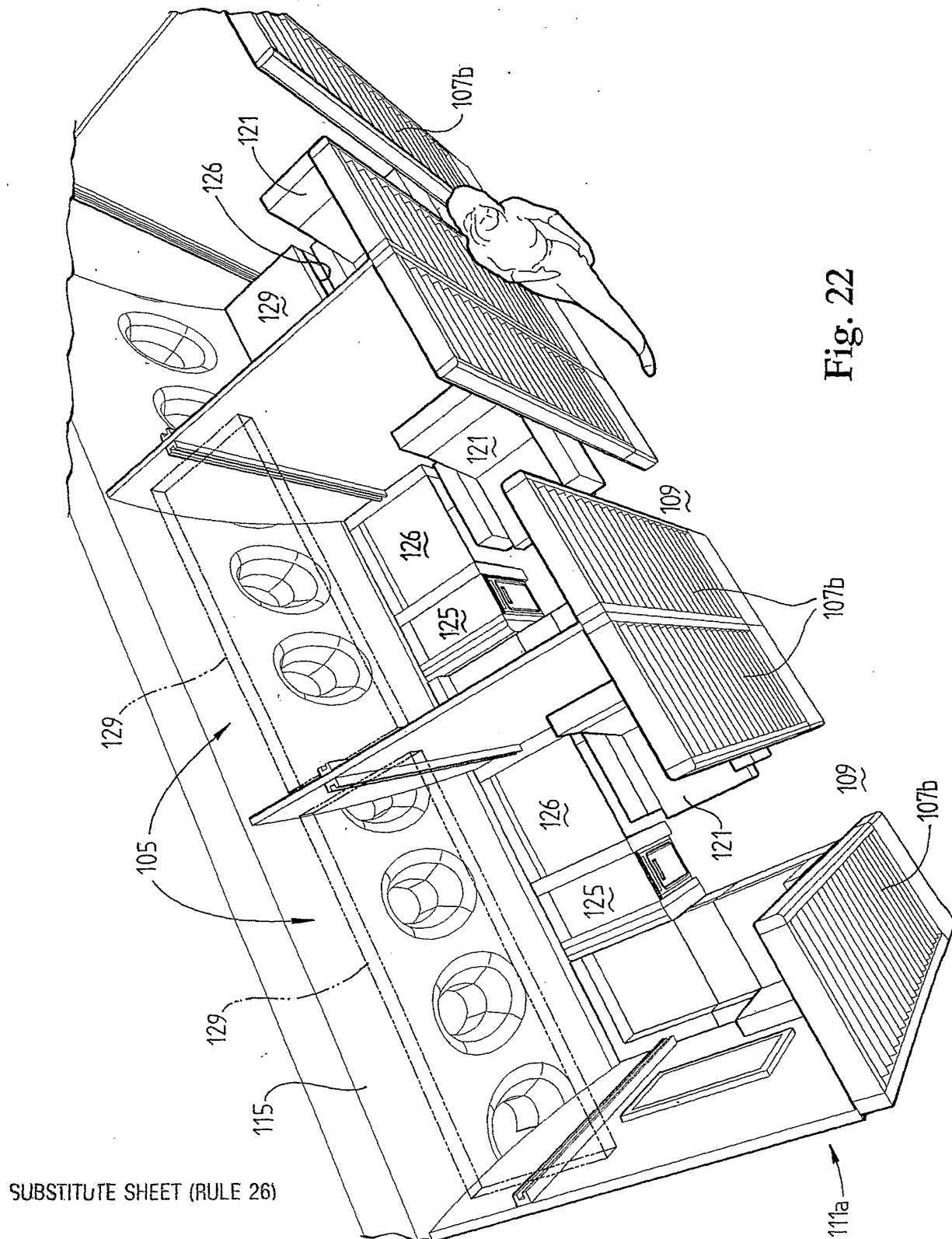


Fig. 22

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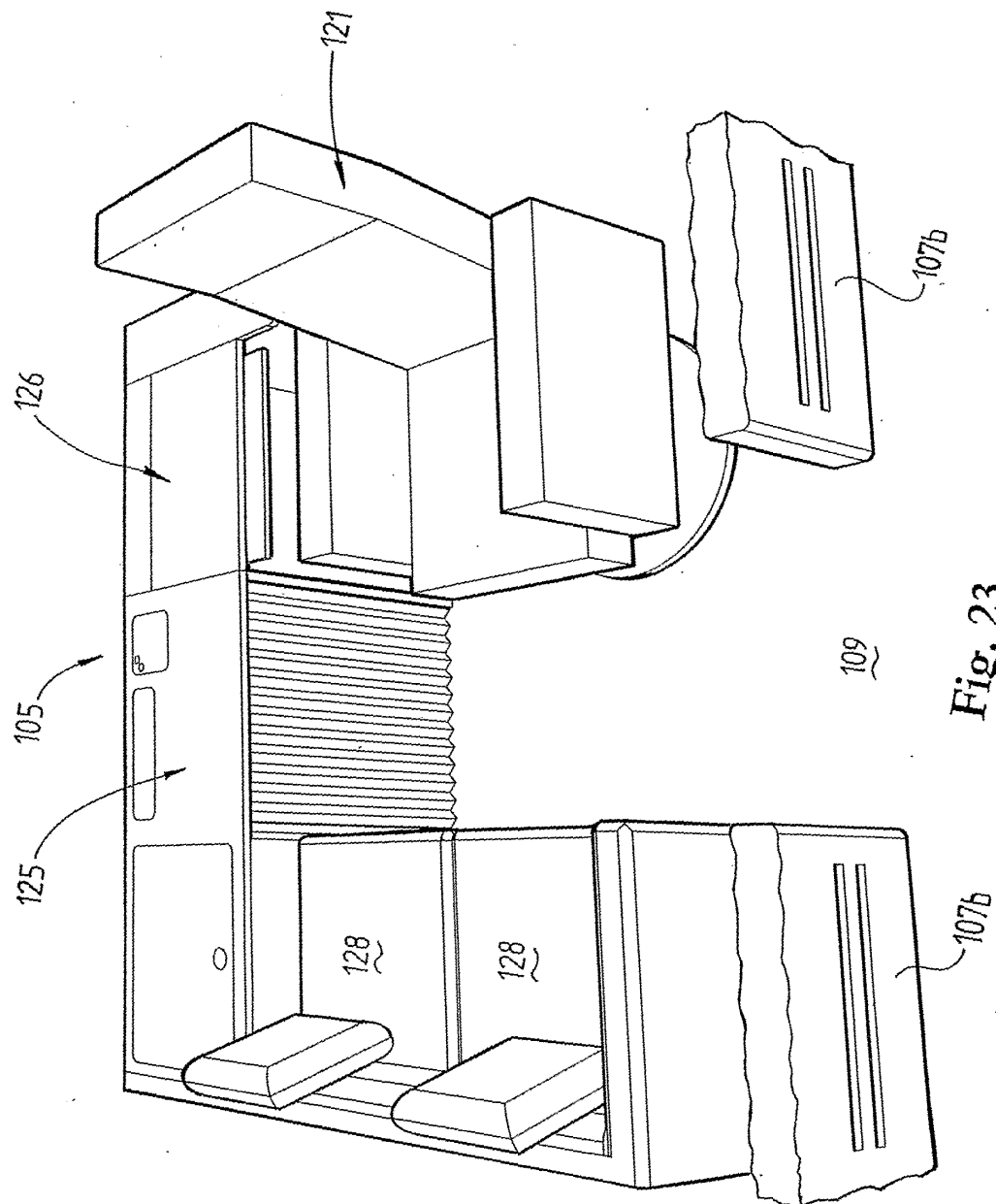


Fig. 23

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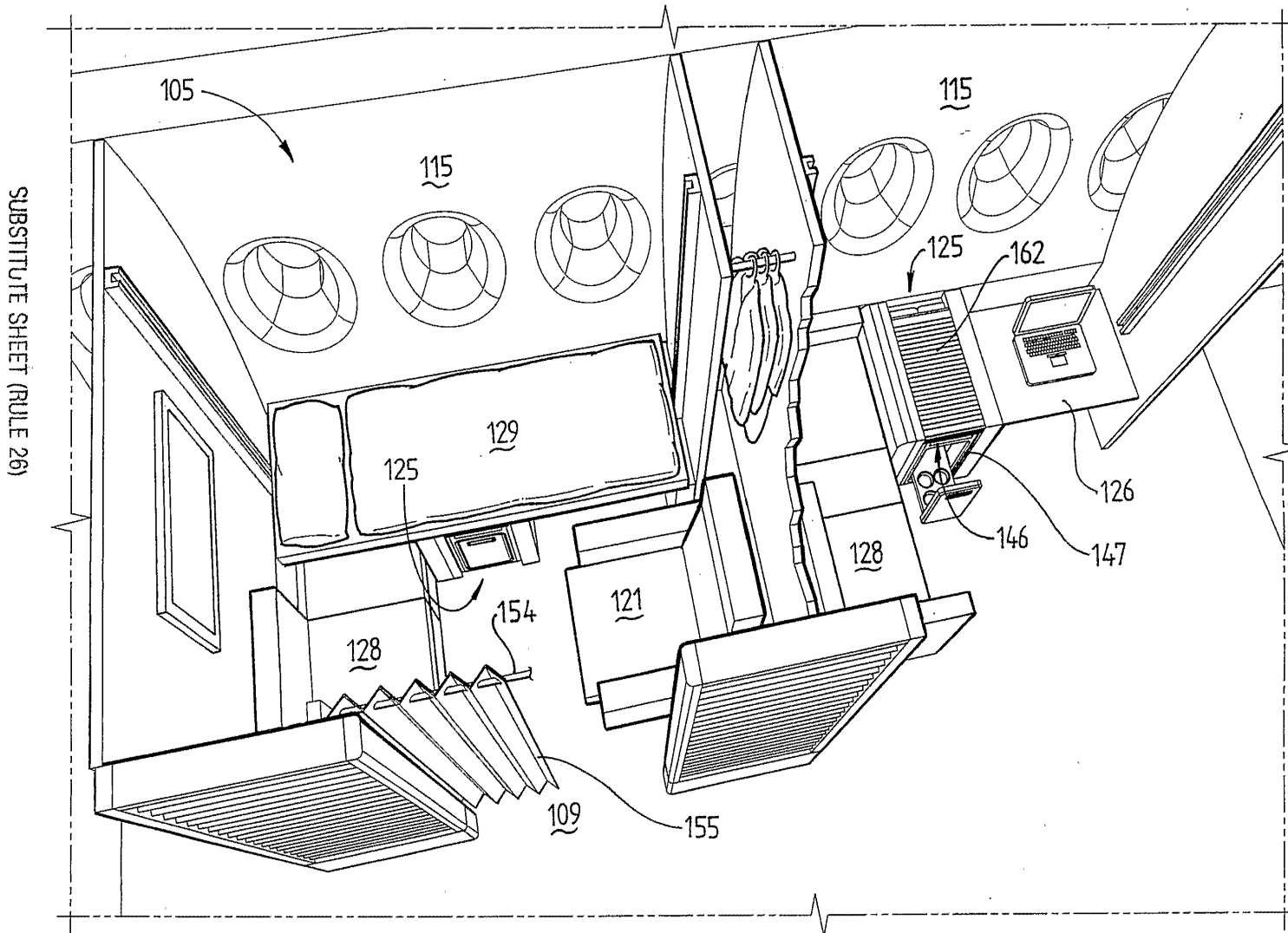


Fig. 24

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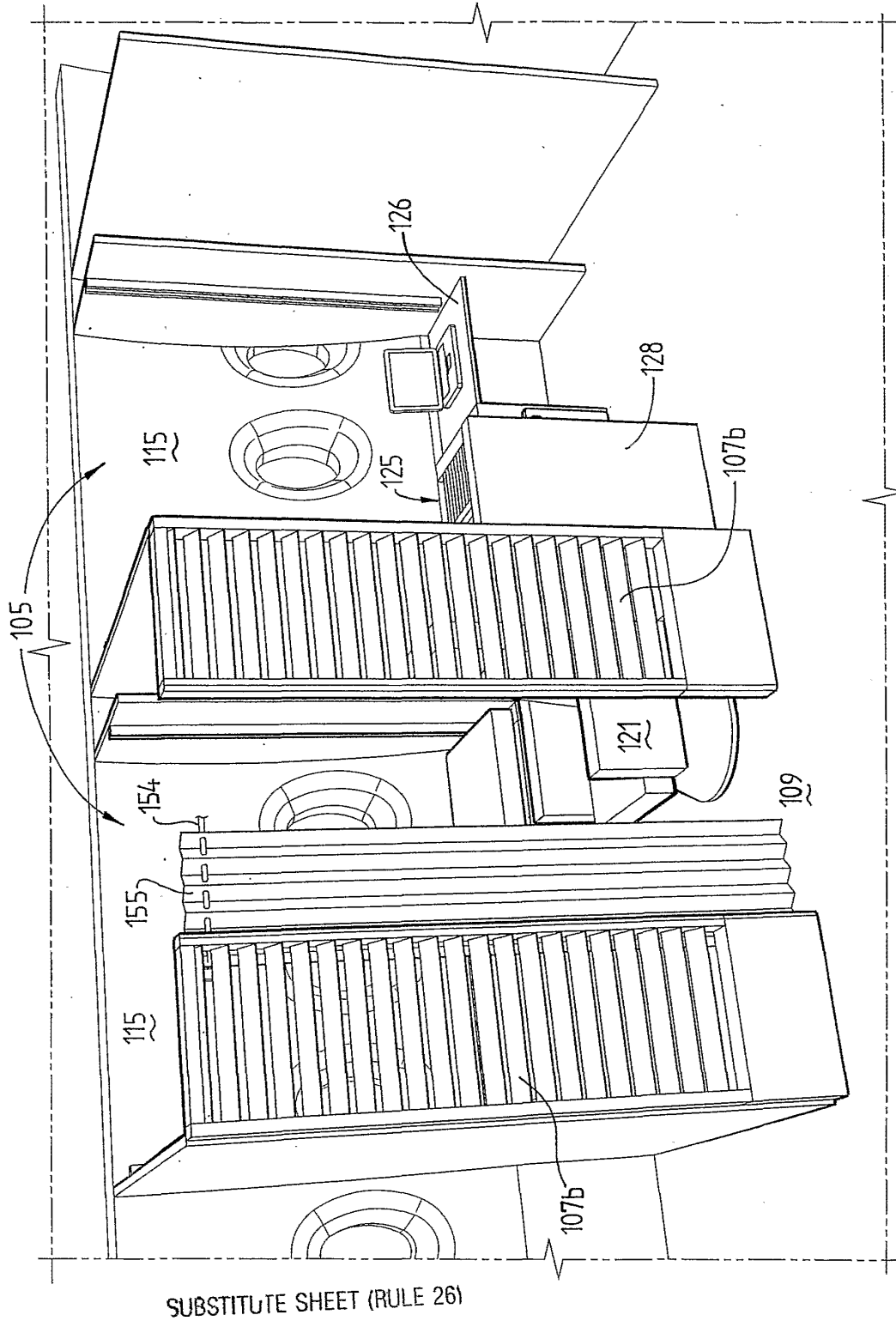


Fig. 25

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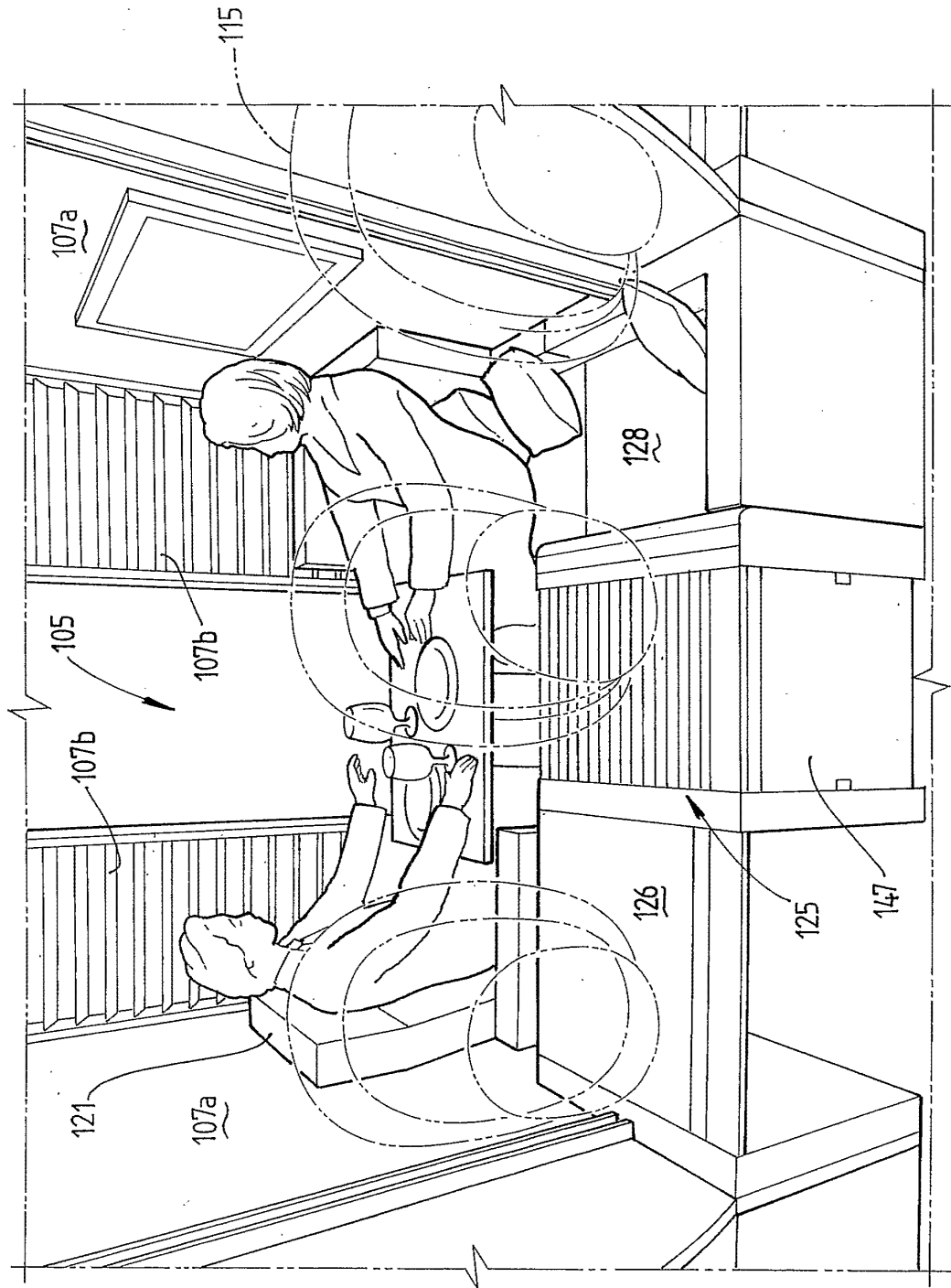


Fig. 26

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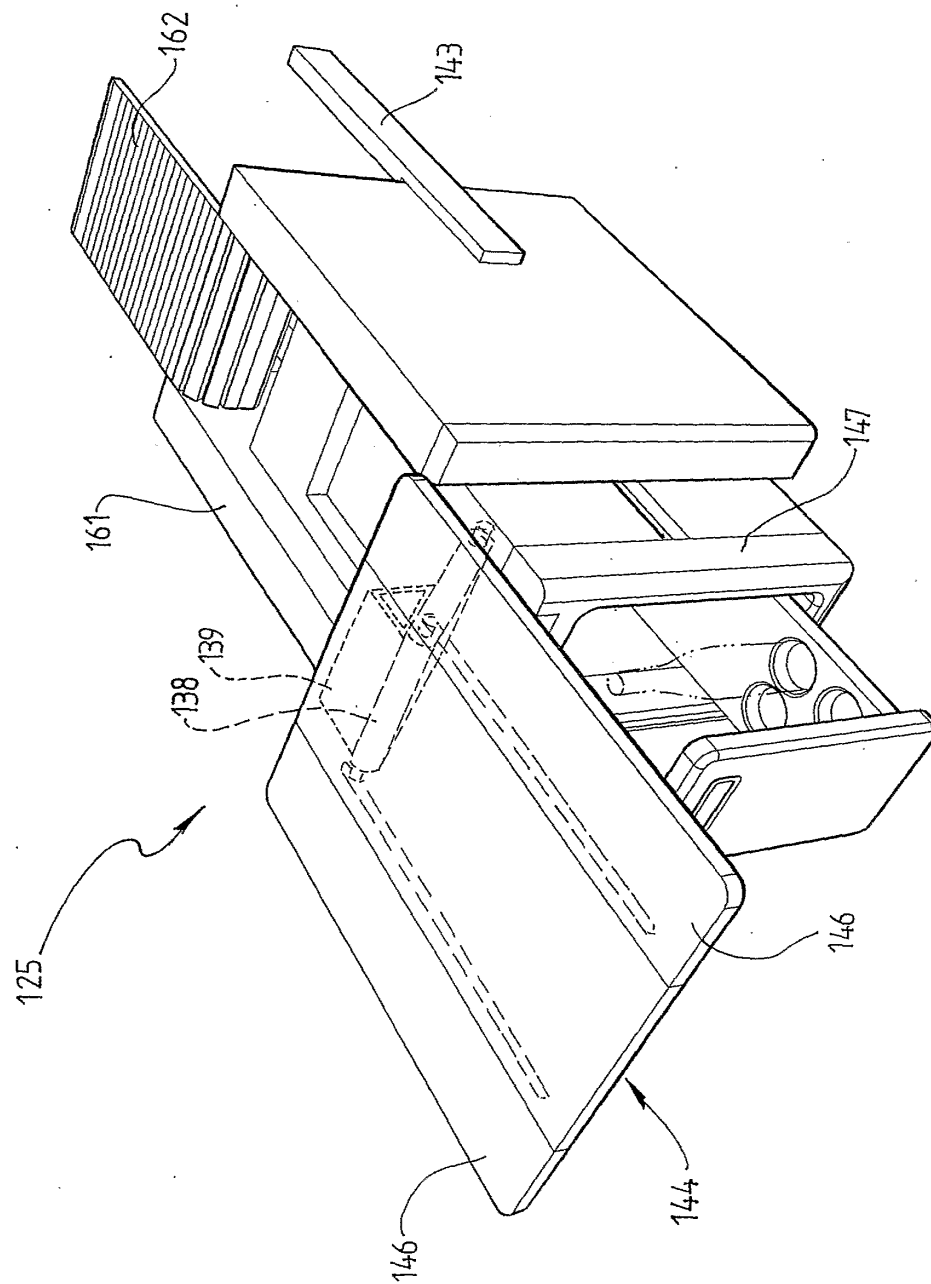


Fig. 27

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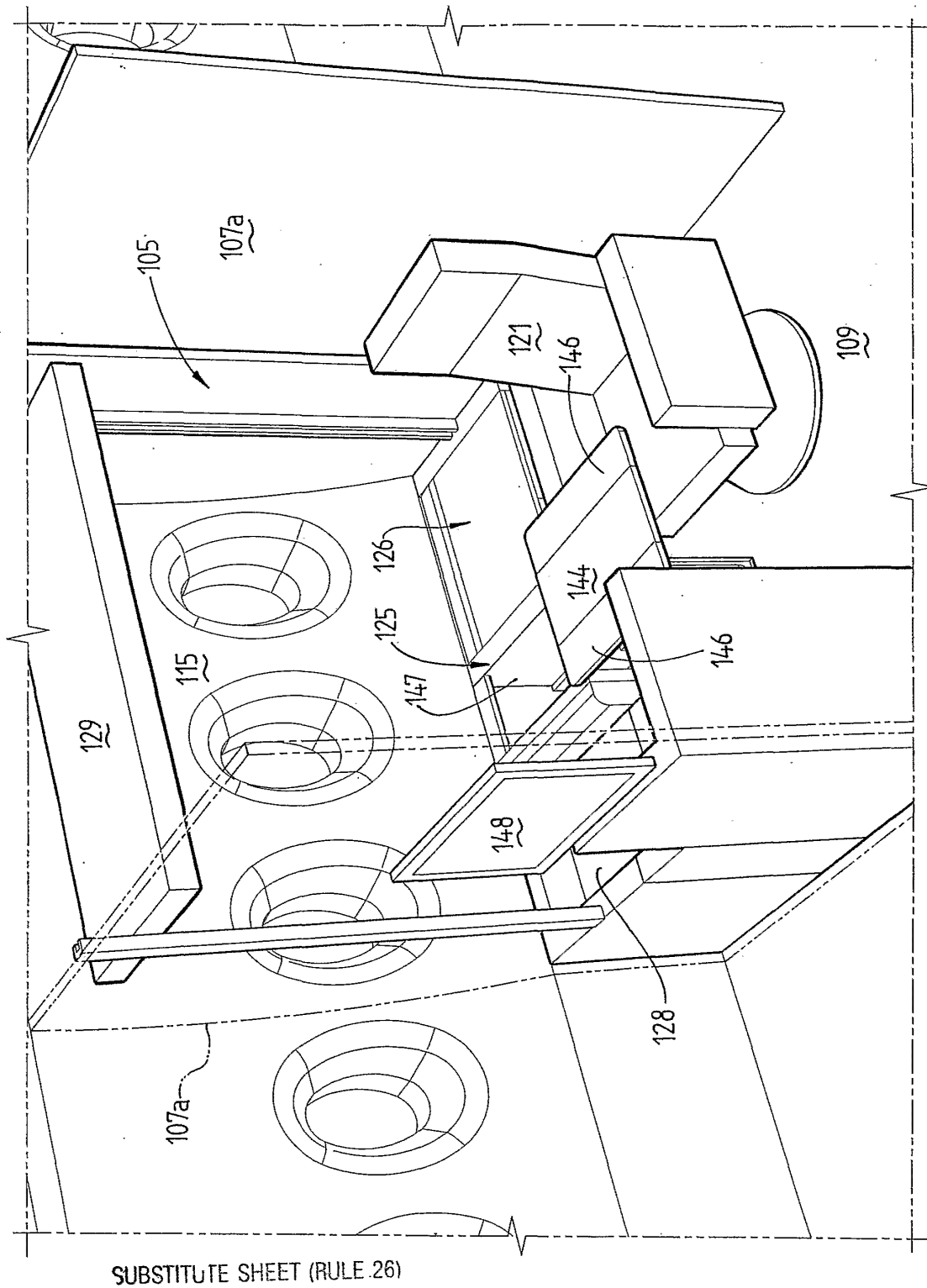


Fig. 28

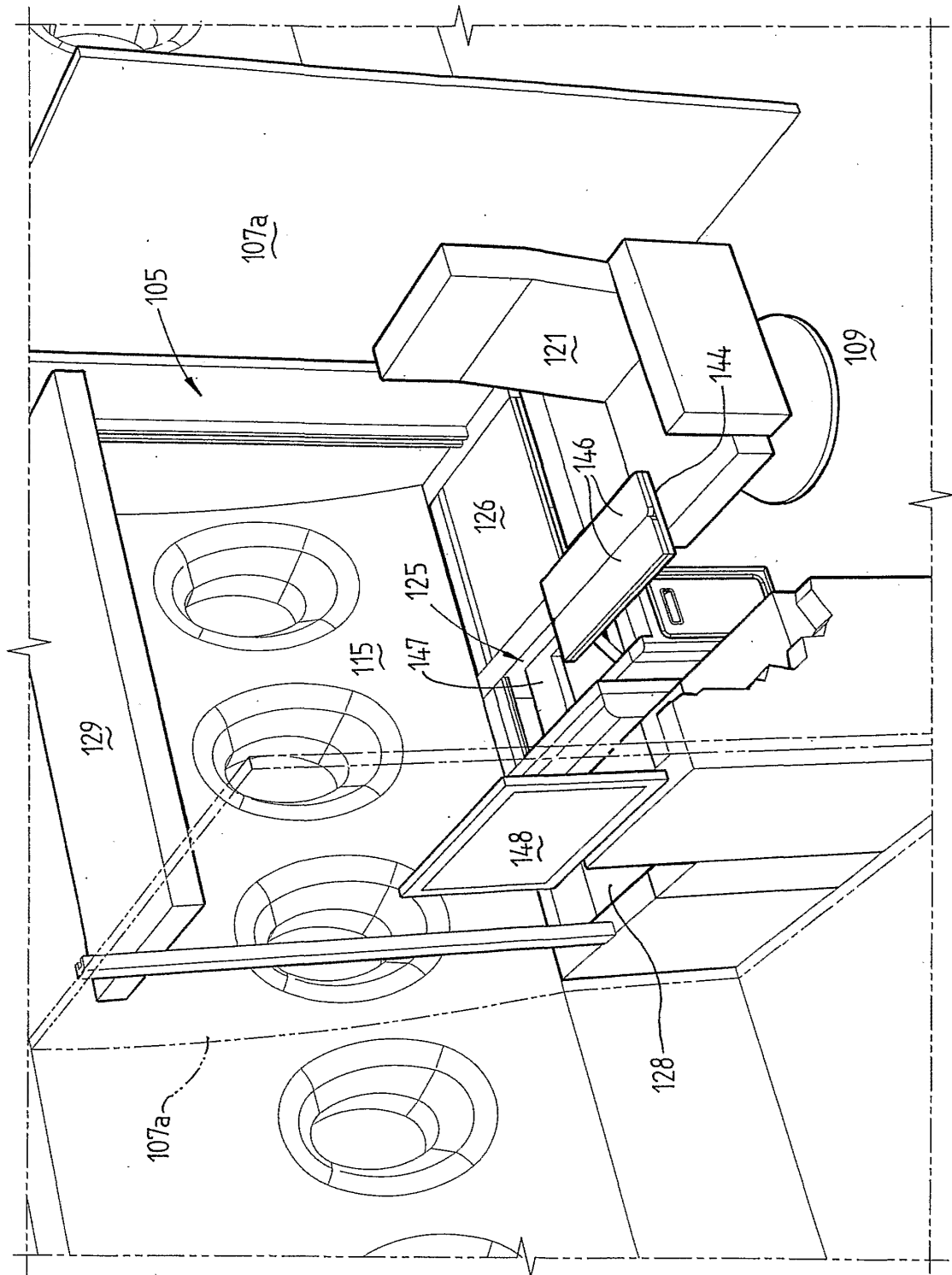


Fig. 29

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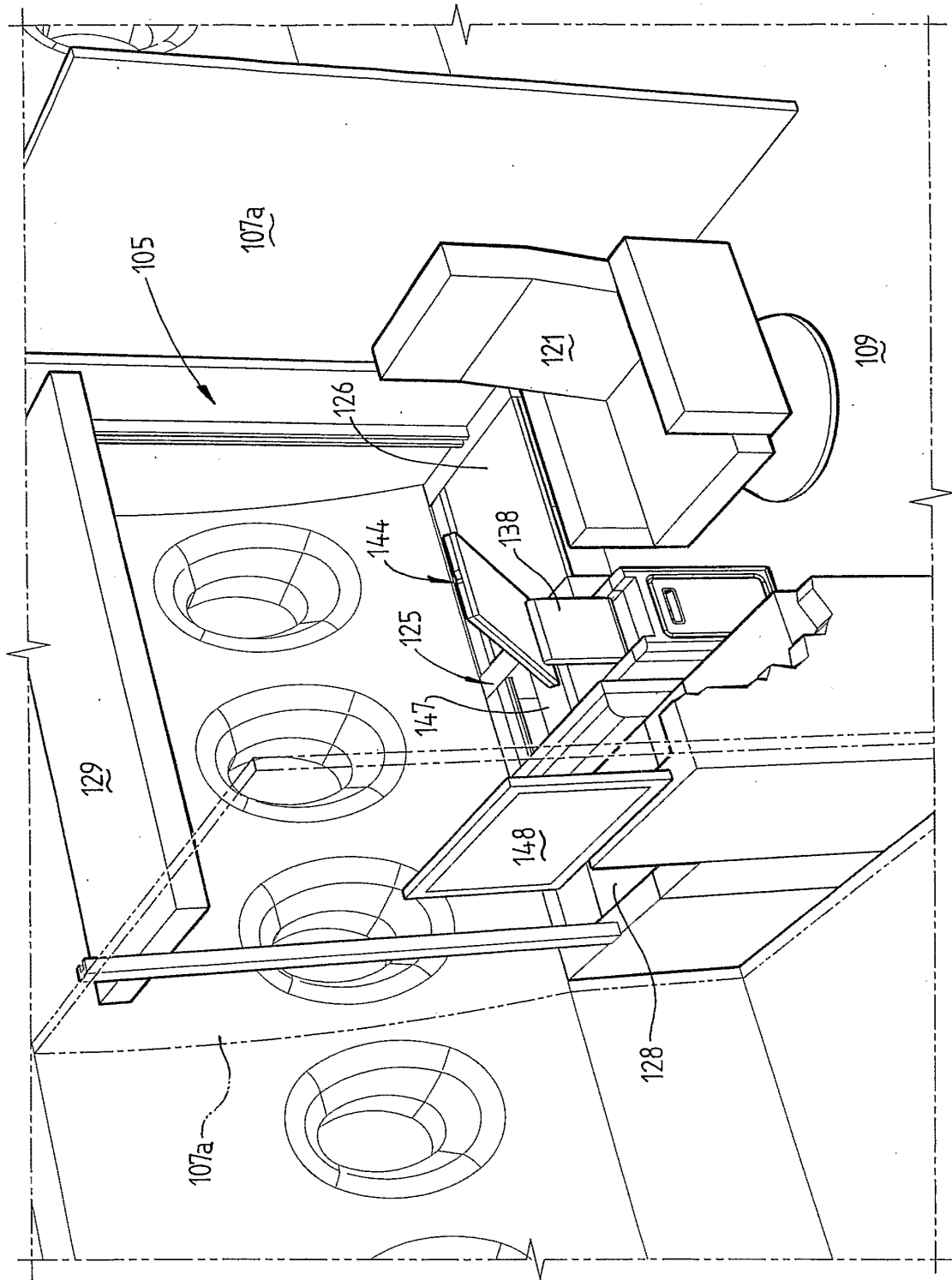


Fig. 30

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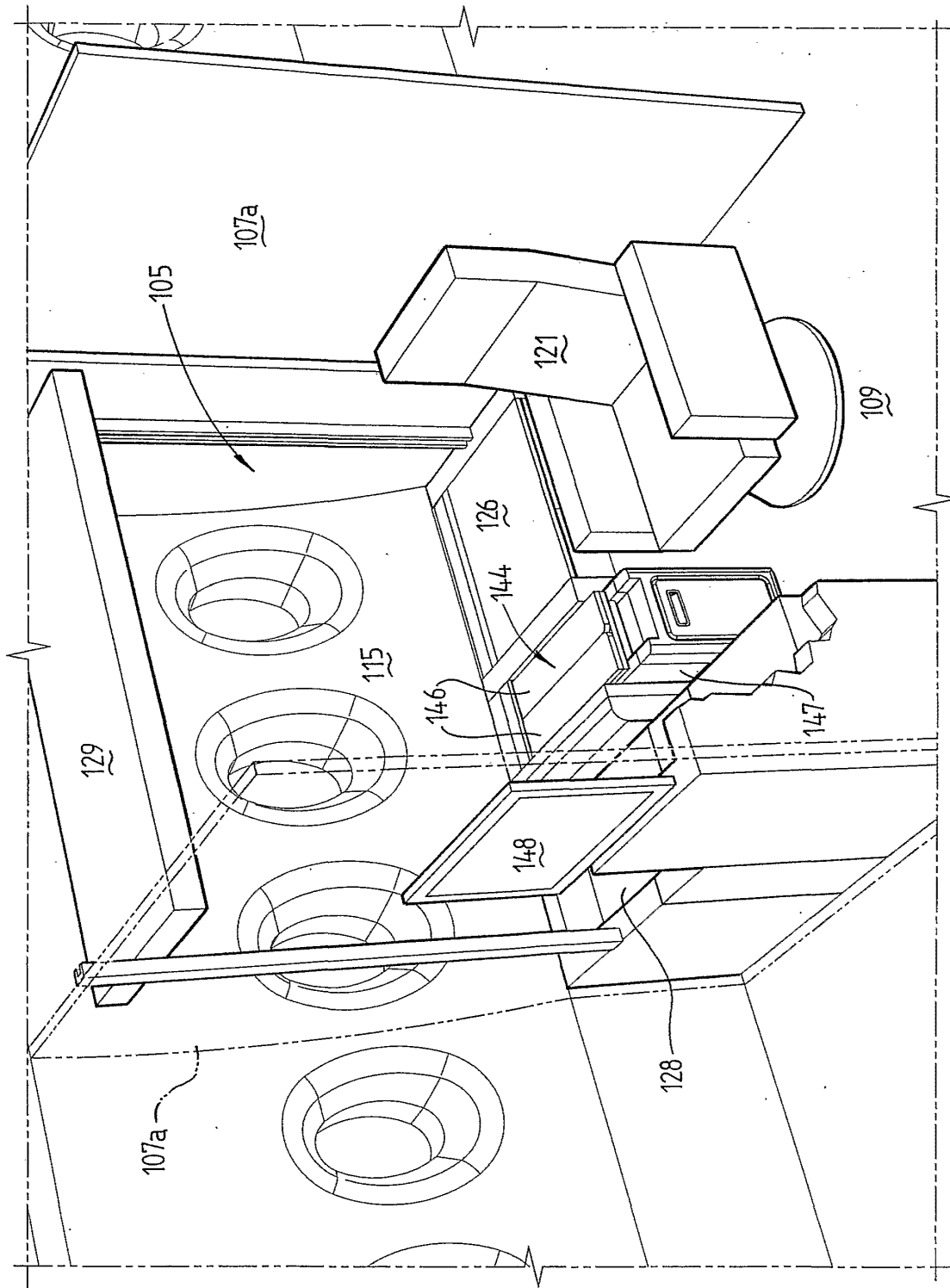


Fig. 31

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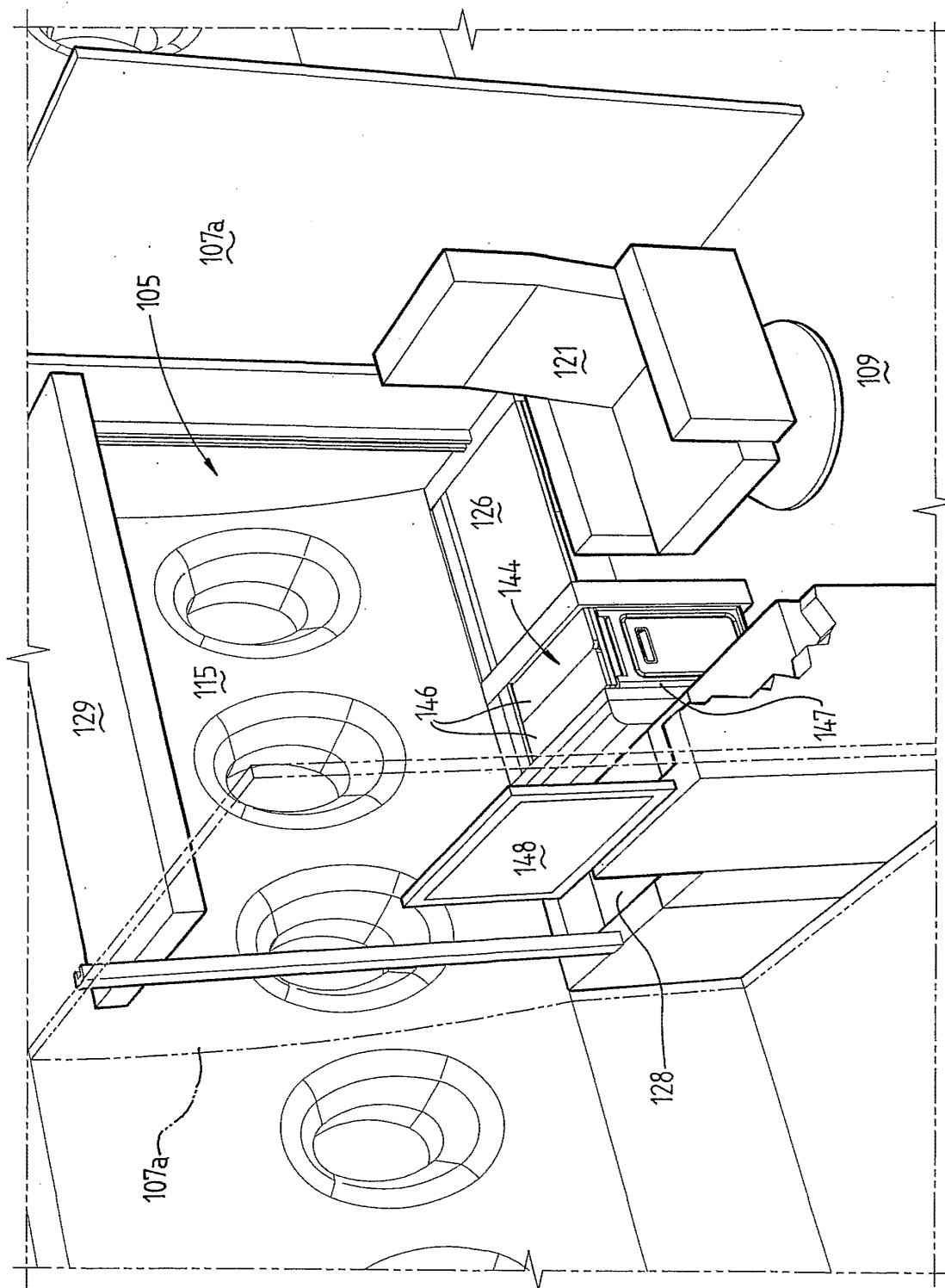


Fig. 32

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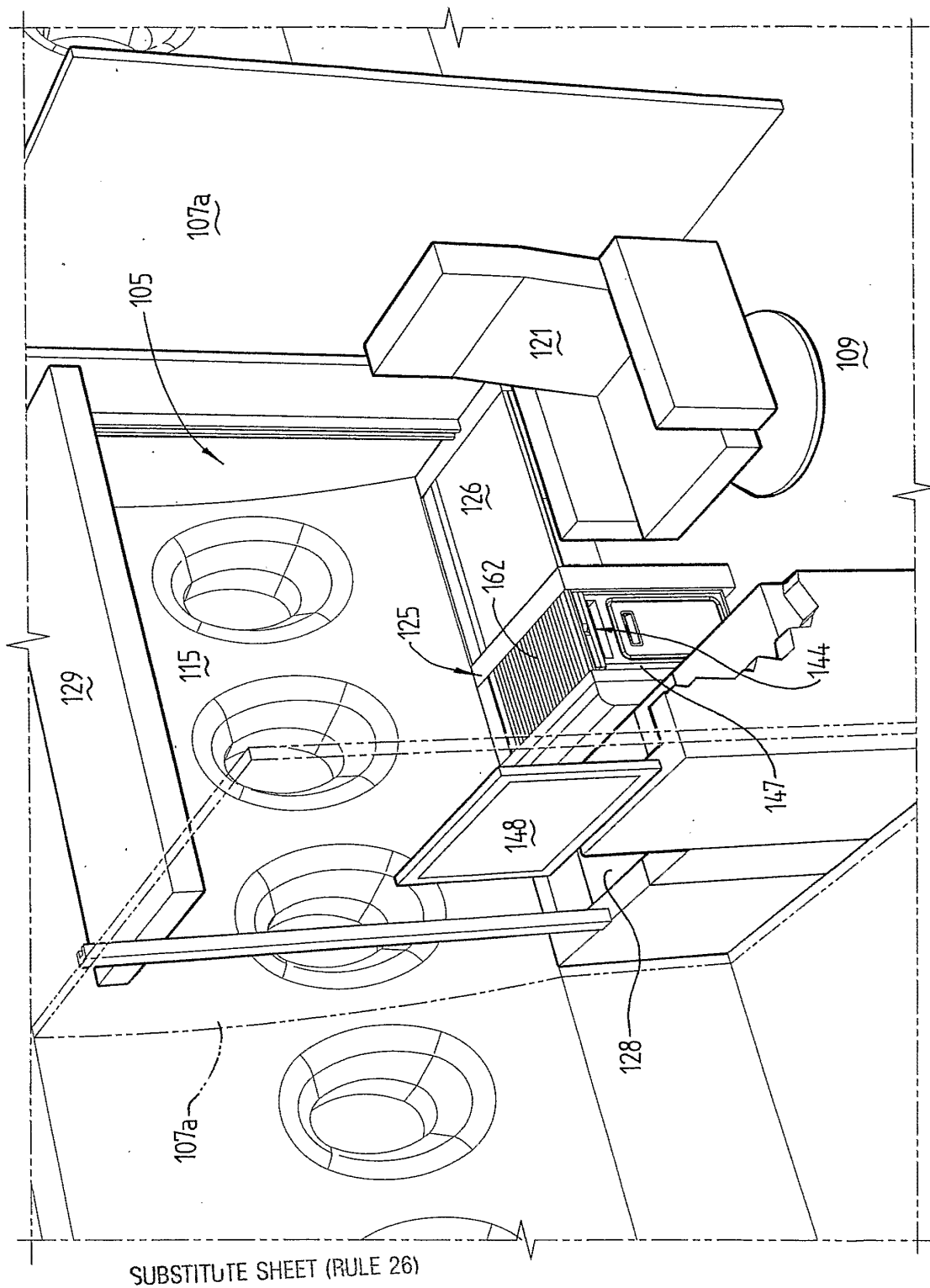


Fig. 33

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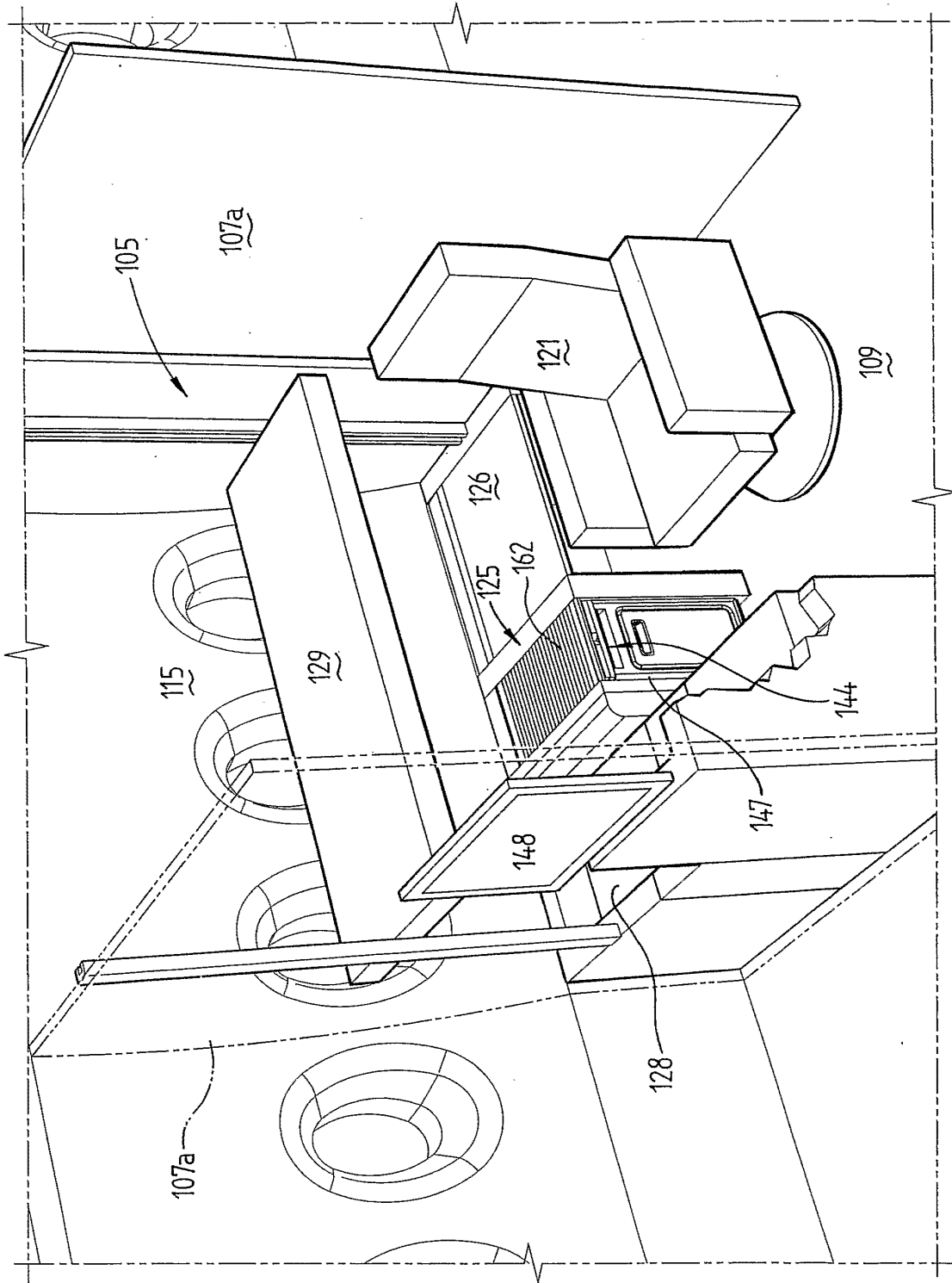


Fig. 34

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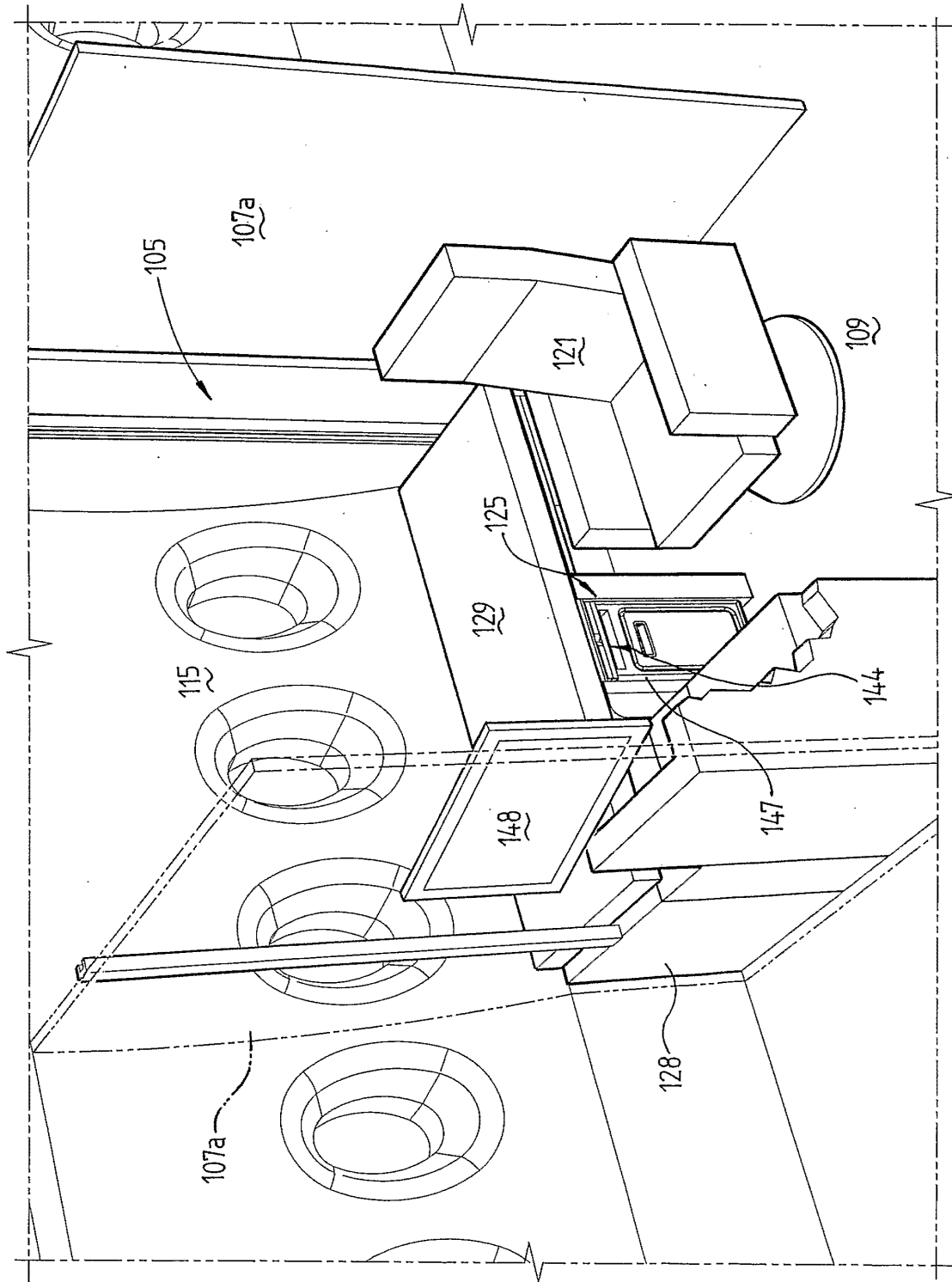
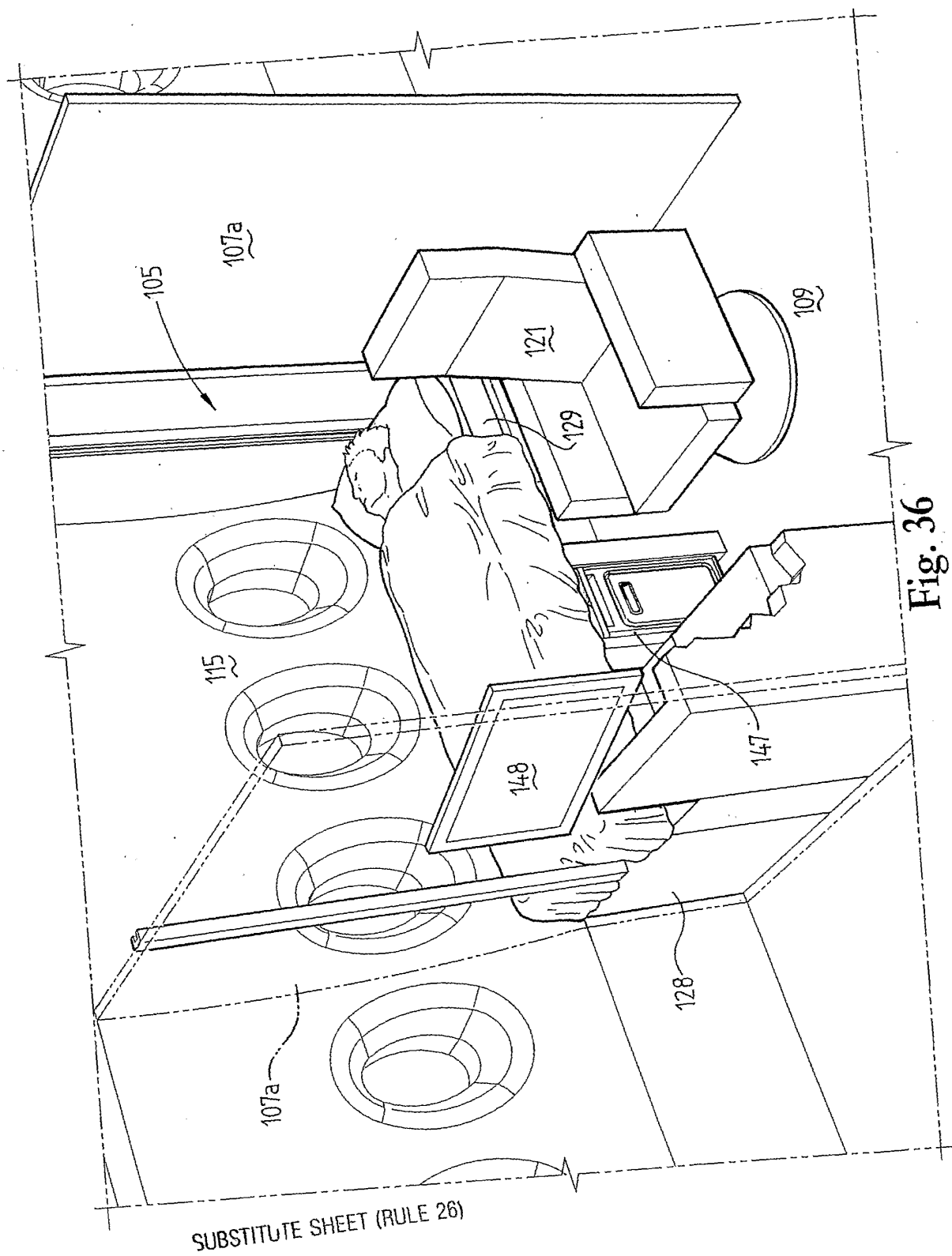


Fig. 35

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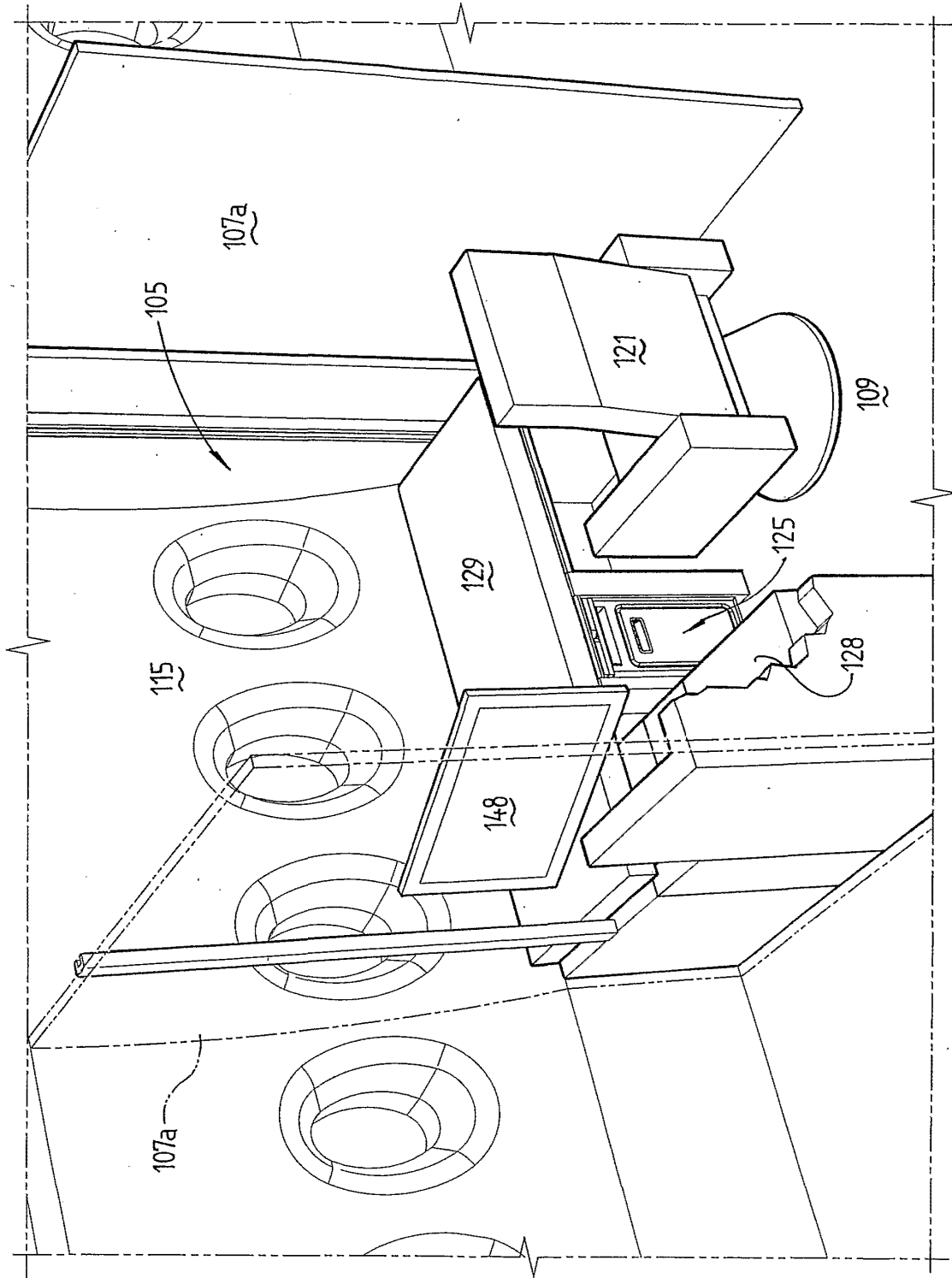


Fig. 37

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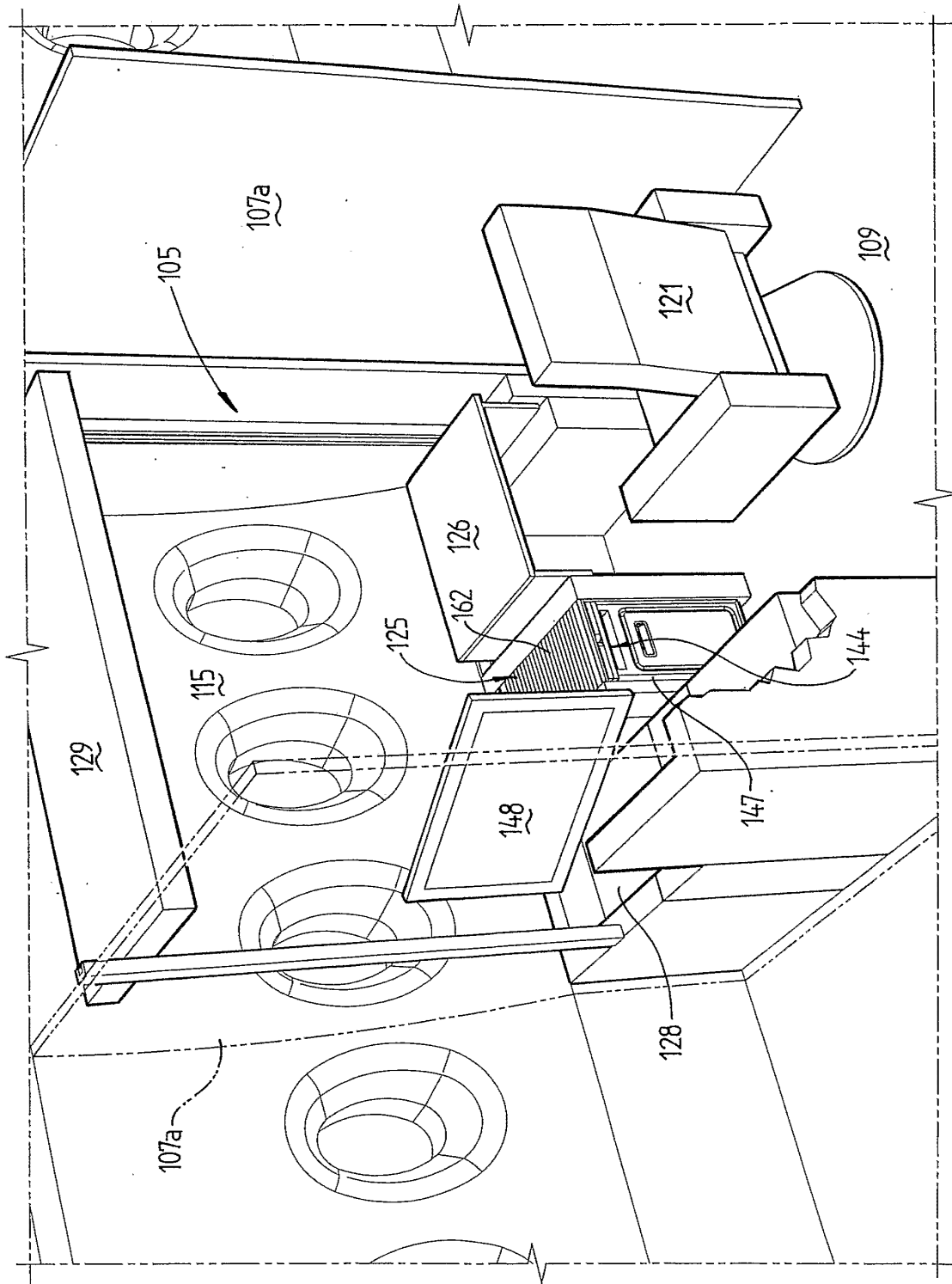


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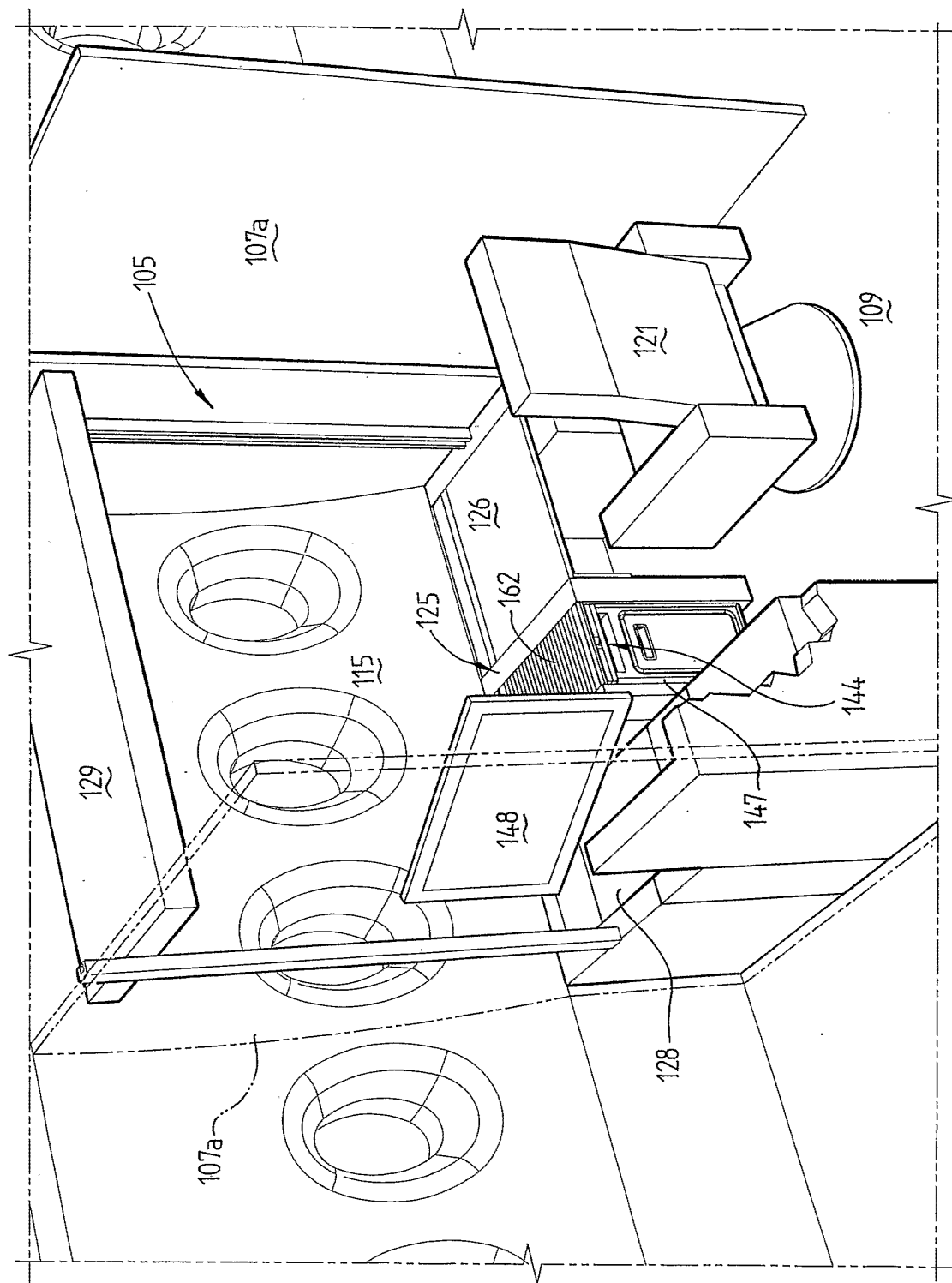


Fig. 39

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG2005/000042

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: B64D 11/00, 11/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI: IPC B60N 3/00, B60P 3/3-, B61D 1/-, 31/-, 33/-, 37/-, B62D 47/-, B63B 29/-, B64D 11/00, 11/06 and keywords: table, desk, chair, seat, office

esp@ce and USPTO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6152400 A (SANKRITHI et al) 28 November 2000 Whole document, but in particular compartments C1-C4 of Fig 16, lines 20-26 of column 9 and Figs 21-27.	1-15, 17-64
X	US 5024398 A (RIEDINGER et al) 18 June 1991 Whole document.	1-15, 17-64
X	US 2092655 A (PAGE) 7 September 1937 See whole document.	1-15, 17-64
X	GB 2362095 A (AMERICAN AIRLINES INC) 14 November 2001 Whole document	1-15, 17-64

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

* Special categories of cited documents:	
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
3 May 2005Date of mailing of the international search report
12 MAY 2005Name and mailing address of the ISA/AU
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustalia.gov.au
Facsimile No. (02) 6285 3929Authorized officer
ZBIGNIEW BIELAWSKI
Telephone No : (02) 6283 2218

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SG2005/000042

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 09202232 A (FUKUYA) 5 August 1997 (& Derwent Abstract Accession No. 97-443615/41, Class Q21, JP 09202232 A (FUKUYA) 5 August 1997) Whole document	1-15, 17-64

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SG2005/000042

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
US	6152400	EP	0901963
US	5024398		
US	2092655		
GB	2362095		
JP	9202232		
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.			
END OF ANNEX			

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number
WO 2005/014395 A1

(51) International Patent Classification⁷: **B64D 11/06**

(21) International Application Number:
PCT/EP2004/008006

(22) International Filing Date: 15 July 2004 (15.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0316733.5 17 July 2003 (17.07.2003) GB

(71) Applicant and

(72) Inventor: THOMPSON, James [GB/GB]; 18 Glen-
loughan Road, Kilkeel, County Down BT34 4SR (GB).

(74) Agents: WALLACE, Alan et al.; FR Kelly & Co, 4 Mount
Charles, Belfast BT7 1NZ (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
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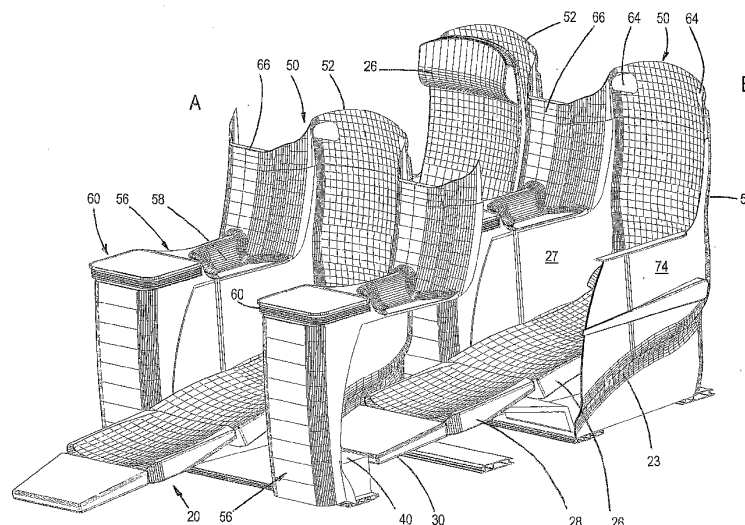
(84) Designated States (unless otherwise indicated, for every
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ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
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FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: SEATING FOR A PASSENGER VEHICLE



(57) Abstract: A seating arrangement for a passenger-carrying vehicle, especially aircraft. The arrangement provides a plurality of seating positions (P1, P2,P3), a seating position comprising a seat (20) and a footwell (22). The footwell (22) of a first seating position (P2, P3) is located beside the seat of a second seating position, the second seating position being located generally forward of the first seating position (P2, P3). Each seat is operable into a reclined state in which a leg-supporting component (30) of the seat projects into the associated footwell (22). The first seating position (P2, P3) and the second seating position (P1) overlap in a transverse direction.

WO 2005/014395 A1

Seating for a passenger vehicle

Field of the Invention

This invention relates to seating for a passenger vehicle. It has particular, but not exclusive, application to seating in a passenger carrying aircraft.

5 Background to the Invention

There are clear economic incentives that drive aircraft designers to provide as many seats as possible in a passenger aircraft. Yet there is a conflicting demand to provide those passengers willing to pay for premium services with a feeling of space and privacy. In particular, business class and first class passengers on long air journeys may
10 be offered seats that recline and can be converted into a bed. Such seats are very attractive to passengers because of the comfort that they offer. However, they are less attractive from the point of view of the aircraft operator because they represent an inefficient use of space within the aircraft.

Although embodiments of the invention will be described with respect to application to
15 aircraft, it is not limited to such applications. It may, for example, find application in other forms of transport such as ships, hydrofoils, trains and coaches and so forth, as well as in other circumstances not related to transport.

Summary of the Invention

Therefore, it would be desirable to provide a seating arrangement that can be used in
20 passenger aircraft and in other circumstances that can provide an increase in passenger-carrying capacity without reducing (and maybe increasing) an occupant's perception of space.

From a first aspect, the invention provides a seating arrangement for a passenger-
25 carrying vehicle, the arrangement providing a plurality of seating positions, a seating position comprising a seat and a footwell, the footwell of a first seating position being located beside the seat of a second seating position, the second seating position being located generally forward of the first seating position, wherein each seat is operable into

a reclined state in which a leg-supporting component of the seat projects into the associated footwell, and wherein the first seating position and the second seating position overlap in a transverse direction.

The positioning of the footwell adjacent to a seat in front allows the seats to be arranged
5 in rows having a pitch that is less than in a conventional arrangement. The overlap in the transverse direction partially counters the increase in transverse spacing between adjacent seats, the overall effect being to provide a passenger with more space *per* unit of floor area occupied than is possible in a conventional arrangement. For a given floor area, embodiments of the invention may allow up to 17% more seats to be provided
10 than can a conventional arrangement.

In preferred embodiments, the second seating position overlaps the or each adjacent footwell in the transverse direction. This helps to further reduce the amount of space required in the transverse direction.

The invention has particular application to embodiments in which the seat can be
15 reclined into a bed state to enable a user to sleep. Unlike in conventional "lie flat at an angle" reclining seats, the footwell does not need to fit below a seat, so its height can be sufficient to accommodate an occupier's feet while the occupier is fully reclined.

In a typical installation, an arrangement embodying the invention may include one or more groups in which seating positions are disposed in rows. For example, each row
20 may be transverse to the normal direction of travel of the vehicle in which they are installed. Such groups may include rows having just one seating position. Alternatively or additionally, a group may have alternate rows having two and three seating positions respectively. In the latter case, most commonly found around the centre line of an aircraft passenger compartment a further advantage of embodiments of the invention
25 becomes apparent. Most passengers can enter or leave their seat without disturbing any other passenger. Only occupiers within the central position of a three-seat row (or inner positions of longer rows) need disturb any other passenger, and a maximum of one other passenger need move for rows of three or four seating positions.

From a second aspect, this invention provides a seating component comprising a seat
30 and a footwell, the footwell being located to laterally beside the seat. Such a seating

component can be used in the provision of an arrangement embodying the first aspect of the invention and within a vehicle embodying the third aspect of the invention.

From a third aspect, this invention provides a passenger-carrying vehicle comprising a seating arrangement according to the first aspect of the invention. This aspect of the invention offers particular advantages where the passenger-carrying vehicle is an aircraft.

A seating component embodying the second aspect of the invention may include a shell. The shell most typically includes a recess that constitutes the footwell.

The shell most preferably is formed as a plastic moulding. In this way, it may be provided with additional functional formations. For example, it typically includes a region to enclose a back of the seat and to enclose operating components of the seat. The shell may also include a formation (amongst other possibilities) that serves as an armrest, a tray, a table, a support for a display monitor and a holder for literature. Where a tray and/or a table is provided by a formation of the shell, it may not be necessary to provide an in-arm table. This allows the space provided to the passenger to be maximised with respect to the overall width of the seating component.

A seating component embodying this aspect of the invention may provide one, two, three or more seating positions. Embodiments that provide one seating position typically have one seat and one footwell. Embodiments that provide two seating positions may include three footwells, and these may be used in alternate rows with seating components that provide three seating positions and two footwells.

The seat provided in embodiments of the invention is movable between an upright position and a reclined position. In the reclined position, the seat may provide a substantially flat sleeping platform. This is advantageously disposed horizontal or at a shallow angle, such as a few degrees (e.g. 2°) from horizontal when in normal use. Note that an aircraft normally flies with its nose slightly high such that the floor is a few degrees (say, 3°) from horizontal. Therefore, to obtain a substantially level bed in normal flight, the sleeping platform must slope downwardly with respect to the floor in a forward direction.

From another aspect, the invention provides a seating arrangement for a passenger-carrying vehicle, the arrangement providing a plurality of sleeping compartments, a sleeping compartment comprising a footwell and a sleeping surface projecting into the footwell, the footwell of a first sleeping compartment being located beside the sleeping
5 surface of a second sleeping compartment, the second sleeping compartment being located generally forward of the first sleeping compartment, wherein the first sleeping compartment and the second sleeping compartment overlap in a transverse direction.

Other preferred features of the invention are recited in the dependent claims provided
10 herewith. The preferred features as described herein or as described by the dependent claims filed herewith may be combined as appropriate, and may be combined with any of the aspects of the invention as described herein above or by the independent claims filed herewith, as would be apparent to those skilled in the art.

Further advantageous aspects of the invention will become apparent to those skilled in
15 the art upon review of the following description of a specific embodiment of the invention and with reference to the accompanying drawings.

Brief Description of the Drawings

Embodiments of the invention will now be described in detail, by way of example, and with reference to the accompanying drawings, in which:

20 Figure 1 is a seating plan showing a seating arrangement in Zone A of an Airbus A340-600 aircraft;

Figure 2 is a seating plan showing a seating arrangement in Zones B and C of an Airbus A380 aircraft;

Figure 3 is a transverse detailed view of seats in the embodiments of Figure 1 and
25 Figure 2 in an upright and a reclined position;

Figure 4 is a detailed plan view of seats in the embodiments of Figure 1 and Figure 2 showing them occupied when in the reclined position;

Figure 5 and Figure 6 are cross-sectional views on, respectively, lines A-A and B-B of Figure 3;

Figure 7 and Figure 8 are part cut-away, perspective views of seats in the embodiments of Figure 1 and Figure 2 showing seats in both upright and reclined positions;

- 5 Figure 9 illustrates an arrangement of seating in the embodiment of Figure 1 or Figure 2 in the region of a cooking galley;

Figures 10, 11 and 12 illustrates an arrangement of seating in the embodiment of Figure 1 or Figure 2 in the region of a lavatory enclosure;

- Figure 13 is a plan view that serves to compare a conventional seating arrangement with
10 one embodying this invention; and

Figures 14 to 19 illustrate respective alternative seating plans comprising seating arrangements embodying the invention.

Detailed Description of the Drawings

- As shown in Figure 1, seating Zone A in an Airbus A340-600 (r. t. m.) aircraft is
15 provided with a total of fifty-nine seating positions. As shown in Figure 2, seating Zones B and C of an Airbus A380 (r. t. m.) aircraft are provided respectively with seventy-three and thirty-two seating positions. Much of the following description applies to both of these embodiments, although it will be understood that the invention is not limited to any specific aircraft or aircraft layout.

- 20 The seats are arranged in three groups, two outer groups 10, 12 and an inner group 14, separated by two aisles 16, 18. Within each group, the seats are arranged in rows that extend generally transversely of the principal longitudinal axis X of the aircraft, the rows being generally parallel with one another. In a preferred embodiment, the rows are spaced with a pitch of approximately 1016 mm (40 inches). Thus, the outer group
25 10 of fourteen seats in the embodiment of Figure 1 has an overall length of approximately 13208 mm (520 inches). Within each outer group 10, 12, each row includes one seating position. In the inner group 14, the rows include alternately two seating positions and three seating positions.

The immediately following description applies to a typical seating position within a group. Seating positions at the front row and rear row of each group differ, and will be described separately below.

Each seating position includes a forward-facing seat 20 and an associated footwell 22.

5 Within the row, each seat 20 is disposed, in a transverse direction (i.e. generally perpendicular to the longitudinal axis X of the aircraft), adjacent to, or beside, a footwell 22 associated with a seating position of the row immediately behind. Hence, adjacent seating positions are displaced or staggered, but overlapping, with respect to one another in the fore-and-aft direction. The fore-and-aft direction runs forwards and
10 rearwards generally along or parallel with the longitudinal axis of the aircraft. The “forward” direction is the direction in which the seats 20, and therefore seated passengers, face and is typically the same as the direction of travel of the aircraft during flight (and generally parallel with the longitudinal axis of the aircraft), although it need not necessarily be so. The seats 20 in successive rows are staggered, or displaced with
15 respect to one another, in a lateral or transverse direction (i.e. across the aircraft, or other vehicle, substantially perpendicular to the forward direction) so that the footwell 22 adjacent a given seat 20 is associated with a seat 20 in the row behind and may be used by the occupier of a seat in the row behind. Moreover, as is described in more detail hereinafter, a given seating position overlaps in the transverse direction with the
20 nearest seating position in front and or behind. The arrangement is such that at least the respective armrests of the seating positions overlap in the transverse direction. As can best be appreciated from Figures 4 and 13, when the seats 20 are reclined into a bed or sleeping state, at least a respective shoulder and/or arm-receiving region of adjacent seating positions (or sleeping compartments) overlap in the transverse direction.

25 As shown in Figure 3, each seat 20 can adopt a range of positions, from an upright position, or state, to a fully reclined, or bed, position, or state, (both being shown in Figure 3). The seat comprises a backrest or back 26 and a seat base or pan 28 (typically comprising a seat squab) that form the back and base, respectively, of the seat when in the upright position. The seat further includes a leg support component or pad 30. In
30 the upright position, the leg support pad 30 extends, out of use, downwardly (i.e. generally towards the ground surface or floor 21 of the aircraft) from a front edge region

of the squab 28. The back 26 is pivotable with respect to the squab 28 to allow the seat 20 to adopt the upright state and the bed state. Similarly, the leg support 30 is pivotable with respect to the squab 28. Conveniently, a life jacket 34 can be carried on the leg support pad 30 beneath the squab 28.

5 The back 26, squab 28 and leg support pad 30 are carried on a linkage 32. The linkage 32 serves to control movement of the components carried upon it at the seat moves between its upright and reclined positions, the movement being driven by an electric, or other, motor (not shown). In the embodiment of Figure 3, the back 26 of the seat 20 does not move (or moves only minimally) rearwards as the seat 20 moves from its
10 upright to its reclined position, i.e. the seat 20 moves generally forwardly from the upright state to the reclined state, and generally rearwardly when moving from the reclined state to the upright state. Movement to the reclined position is achieved by a generally downward (i.e. generally towards the aircraft floor) and generally forward pivoting movement of the back 26, a predominantly forward movement of the squab 28,
15 and a generally upward (i.e. away from the floor) pivoting movement of the leg support pad 30. When reclined, the back 26, squab 28 and leg support pad 30 form an approximately flat sleeping platform which, in the preferred embodiment, is of length approximately 1880 mm (74 inches) and is angled at a few degrees (say, 2°) from the horizontal while the aircraft is in normal level flight. (This is achieved by its being at
20 an angle of approximately 5° to the floor.) In such a position, the leg support pad 30 extends into the associated footwell 22. In general, it is desirable to provide a sleeping platform that is as close to horizontal as possible.

The linkage 32 may for example comprise one or more linkage members or bars 33 pivotably coupled to the floor 21 and to the back 26, and one or more linkage members
25 or bars 35 pivotable coupled to the floor and to the squab 28. One or more of the linkage bars 33, 35 may be driven by the motor.

As may best be seen from Figures 7 and 8, within the footwell 22 there is advantageously a platform 40 having an upper surface that is generally parallel to the floor of the aircraft at a height of, for example, approximately 183 mm (7.2 inches) and
30 width of, for example, approximately 307 mm (12.1 inches). When the seat 20 is in the reclined position, an edge of the leg support pad 30 that is furthest from the squab 28 is

adjacent to and substantially level with the platform 40, such that the platform can serve as an extension of the sleeping platform that is provided by the reclined seat. This can be used to provide a sleeping platform that is longer than that which could be provided by components of the seat alone.

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Figure 4 shows three typical seating positions (shown with the respective seats in the reclined state) of the seating arrangement described above occupied by passengers. The torso and head of a person (identified as P1 in Fig. 4) occupying a seat in a first row is adjacent to the legs of passengers (P2, P3) in an immediately rearward row. The width of the footwell 22 is less than the width of the seat 20. The seat of the occupant P1 and the seats of the occupants P2, P3 overlap in said transverse direction (i.e. the lateral direction generally perpendicular with the forward direction). In particular, it will be seen that the respective regions for receiving the shoulders and arms of the seat occupants are overlapping in the transverse direction. In the preferred embodiment, the respective seat backs 26 overlap in the transverse direction. In the preferred embodiment, the footwells 22 are shaped to become generally narrower in said forward direction (and preferably in a gradual manner). Hence, the respective seat stations 19 (i.e. the respective area in which each seat is located) become correspondingly wider in said forward direction. This allows a more efficient use of space than is possible with seating arranged conventionally in transverse rows. (A comparison of an embodiment of the invention and a conventional arrangement is shown in Figure 13.)

When the respective seats 20 are in the reclined state, the respective seating positions provide a respective sleeping compartment, each sleeping compartment including the respective footwell 22 and a sleeping surface projecting into the footwell, the sleeping surface being provided at least partly by the respective seat 20 when in the reclined state. As may best be appreciated from Figure 4, adjacent sleeping compartments (e.g. the respective compartments for passengers P2 and P1 or for passengers P1 and P3) overlap in the transverse direction. In some embodiments, the sleeping surface may be entirely provided by the respective reclined seat 20. In other embodiments, the sleeping surfaces are provided mainly by the respective seats 20 although the sleeping compartment may also comprise one or more regions for receiving the passenger's

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shoulders and/or arms that may be separate from the seat 20 itself. In the preferred embodiment, adjacent sleeping surfaces overlap in the transverse direction.

The preferred shapes and dimensions of the seating positions in this seating arrangement are shown in detail in Figures 5 and 6, each of which shows a sectional view taken in a generally transverse plane, i.e. a plane that is generally perpendicular to the forward direction. In Figure 5, the back 26 of one seat (in the reclined position) is shown alongside the leg support pad 30 (also in the reclined position) of an immediately rearward seat 30. It will be seen that the seat station 19 for seat 20 overlaps with the adjacent footwells 22 in the transverse direction. Moreover, it will be seen that a portion or region of the seat station 19 protrudes or projects over part of the adjacent footwell 22 with respect to the floor 21. Hence, part of the footwell 22 is located beneath the seat station 19. It may therefore be said that the seat station 19, and in particular the region of the seat station 19 that receives a passenger's arms and/or shoulders (especially in the reclined or sleeping position) overhangs part of the or each adjacent footwells 22. The region of overlap caused by the overhanging portion of the seat station 19 extends in both the transverse and longitudinal directions and so the seat station 19 and footwell(s) 22 have a respective portion or region which share a common, or overlapping, area extending in both the transverse and longitudinal direction.

The respective seats 20 of the seat positions may also overlap or overhang said footwells 22 in the manner described above. Hence, the footwells 22 become generally narrower in a direction generally upwardly, or away, from the floor 21. Preferably, the narrowing of the footwells 22 in this direction is effected by the provision of an inflected portion 23 in a respective dividing panel 27 between the seat station and adjacent footwell(s) 22. As illustrated, the dividing panel 27 may extend generally perpendicular to the floor on either side of the inflected portion 23. Advantageously, the inflected portion 23 is provided below the level of the back 26 when in the reclined state and above the level of the leg-support pad 30 when in the reclined state. The arrangement described above also provides a particularly efficient use of space and allows seats 20 to be located relatively close to one another in the transverse direction while still providing sufficient space for passengers. In the preferred embodiment, the

shoulders and/or arms of a passenger when fully reclined overlap, or overhang, with the leg support component 30 of the seat 20 behind.

In a preferred embodiment, the width of the space that is provided for each passenger in the reclined seat at shoulder height is approximately 602 mm (23.7 inches). Within the
5 footwell, the width is approximately 307 mm (12.1 inches). The depth of the footwell is approximately 360 mm (14.2 inches). Also illustrated in these drawings are possible locations for the seat electric box (SEB) and the in-flight entertainment box (IFE).

Further details of the implementation of the invention will now be described.

Four distinct types of seating components are provided in each embodiment. Within the
10 inner group 14, alternate rows have two seats (and three footwells) and three seats (and two footwells). An end part of each type of row is shown in Figures 7 and 8 generally indicated at A and B, respectively. Within the outer groups 10, 12, each row has one seat. Alternate rows have the seat to the left (looking forward) and to the right of the footwell of the row behind. The construction of each of these assemblies is similar, and
15 will now be described.

In the preferred embodiment, each seating component or assembly comprises a shell 50 shaped to define the respective station 19 for one or more seats 20 and to define a respective footwell 22 on one or both sides of the or each seat station 19. Each seating
20 row may be provided by a single shell 50. In the preferred embodiment, the shell 50 is shaped so that the or each seat station 19 overlaps with the or each adjacent footwell 22 in the transverse direction. In the preferred embodiment, the shell 50 is shaped so that the or each seat station 19 overhangs part of the or each adjacent footwell 22 in the manner described above with reference to Figures 5 and 6 (in which case the shell 50
25 provides the respective dividing panels 27). The shell 50 is preferably shaped so that the seat stations 19 become wider, and the footwells 22 become correspondingly narrower, in the forward direction. Each shell 50 may comprise a moulded plastics shell 50. Preferably, the shell 50 has one or more formations that constitute several functional components.

- First, the shell 50 has a respective upright concave (to the front) region 52 for each seat - thus, each shell 50 may have one, two, three or more such regions. Each concave region 52, which forms part of the respective seat station 19, may have an aperture 64 formed through it at an upper part. In this embodiment, two such apertures 64 are
5 provided on each concave region. Such an aperture 64 can be used as a hand-hold by passengers walking in the aisles or while gaining access to or exiting from the seat, and they can also contribute to the aesthetic design of the seating components. The upright concave region 52 covers the rear of the seat back 26 when it is in its upright position, and extends downwardly to enclose the linkage 32 and the motor.
- 10 When viewed from the front, the shell 50 has a forwardly-projecting abutment or buttress portion 56 between adjacent seat stations 19, or adjacent single seat stations 19. The buttress portion 56 provides a console and may, for example, have a generally rectangular cross-section. The buttress portion 56 extends adjacent to the seat pan or squab 28 of the seat 20 when it is in the upright position. An upper surface of the
15 buttress, which in the preferred embodiment is at a height approximately 729 mm (28.7 inches) above the floor level, preferably has a longitudinally extending concave formation 58 adjacent to each of the seats 20. Each concave formation 58 provides an armrest for a person in the adjacent seat when it is upright. The armrests 58 overlap or overhang the footwell 22 defined below.
- 20 At its forward extent, the buttress 56 comprises a stowage area which, in the preferred embodiment, comprises a generally flat-topped region 57. This flat-topped region 57 carries or stows a tray or tray assembly 60 when not in use. The tray assembly 60 can provide a relatively small tray surface when disposed in a folded position upon the buttress 56 (as shown in Figure 8). Alternatively, a separate table may be provided for
25 this purpose, the tray 60 being stowed beneath the separate table. Preferably, the tray assembly 60 comprises one or more (preferably two) tray portions or leaves 60 that can be deployed or folded out generally across the adjacent seat 20 (see 62 in Figure 7). This provides a larger tray surface, approximately 698 mm (27.5 inches) above floor level for example, for serving a meal. The tray or tray assembly 60 may therefore be
30 stowed adjacent its associated seat and, moreover, when stowed, is disposed generally parallel with the floor 21. This is in contrast to conventional trays of business class and

first class seating which are stowed in the seat's armrest and are disposed generally perpendicularly to the floor. It is found that, in typical embodiments, by stowing the tables or trays 60 in the manner described above, each seat station 19 may be approximately 75 to 100 mm (3 to 4 inches) wider than would be possible using a conventional tray stowage arrangement. The configuration of the tray assembly 60 and its deployment mechanism may take a variety of forms. In the preferred two-leaf embodiment, the leaves are hinged to one another along a respective edge in a generally book-like manner, one leaf being pivotably connected to the buttress 56 for rotation about an axis that is generally perpendicular to the floor 21. Said one leaf is also slidably connected to the buttress 56 in the fore-and aft direction.

As may best be seen from Figures 1 and 2, in the preferred embodiment, the buttress 56, and therefore the associated footwell 22, projects beyond the foremost edge of the seat pan 28 (when upright) in the forward direction. In the preferred embodiment, the buttress 56 projects beyond the seat pan 28 by approximately 150 to 200 mm (6 to 8 inches). This allows the pitch between rows to be relatively small while still providing enough space to allow the seat, and occupying passenger, to recline fully in a substantially horizontal position. By way of example, an egress space of approximately 216 mm (8.5 inches) is provided between the front of each buttress 56 and the rear of the shell 50 in front. Since the shell 50, and in particular the rear of the shell 50 is fixed, the egress between rows is constant and is not compromised when the seats of the forward row are reclined. From another perspective, each seat 20 may move between its upright and reclined state in a fixed spaced defined by the fixed shell 50 that defines its associated seat station 19 and by the fixed shell 50 of the seat(s) in front.

Accordingly, movement of the seats between the upright and reclined states does not affect the passengers in the rows in front or behind. In an alternative embodiment (not illustrated), the rear of the shell may recline rearwardly to accommodate a seat whose back reclines rearwardly.

When viewed from the rear, the buttress 56 presents a forwardly extending recess 54 that opens rearwardly. The recess 54 provides the footwell 22 for a seating position to the rear. The height of the footwell 22 above the floor 21 is determined by the height of the upper surface of the buttress 56 and is sufficiently high to receive the legs of a

passenger on a seat in the fully reclined position. A generally flat support member 61 (Fig. 3) may extend transversely across an upper part of the recess 54 to form a storage pocket, taking the place of the pocket that is normally provided on the back of a conventional aircraft seat. The support member, which may be rigid or flexible, advantageously slopes downwards in a forward direction with respect to the floor at an angle of a few degrees. This is to resist the tendency of articles to fall from the storage pocket while the aircraft is accelerating for takeoff or when climbing.

An upright shell or web portion 66 of the shell 50 extends between adjacent concave portions 52. A corresponding upright portion 68 extends adjacent to the concave portion 52 of the one-seat seating assemblies and outwardly from outer sides of the concave regions 52 of the two-seat seating assemblies. Each such upright portion 66, 68 includes a generally flat portion 71 extending in a generally transverse direction and positioned generally in front of a respective seat 20 in the row behind. It can therefore be used to carry a display screen, or monitor 70 in a position that can be conveniently viewed by an occupier of that seat. The upright portions 66, 68 project forwardly of the concave regions 52 (and may be said to be convex to the forward direction) to define a wall or screen 69 between adjacent seat stations 19. The screen 69 preferably extends from the buttress 56 to a level substantially at or adjacent the, in use, upper edge of the back rest 26 when in the upright state, and may extend only part way along the buttress 56 in the forward direction. The screen 69 improves the privacy of occupants in adjacent seats.

Adjacent to each aisle 16, 18, the shell 50 has a forwardly extending arm portion or panel 74 that is generally disposed in a plane generally parallel with the forward direction and that extends beside the squab 28 of the seat 20 when in the upright position. An upper surface of the arm portion 74 is formed as a lip or shelf 75 that turns in above, or overhangs, the seat squab 28 (when in the upright state) to serve as an armrest. The armrest 75 is generally planar in form and is disposed in a plane generally parallel with the seat pan 28 (when upright). Hence, the seat station 19 comprises a space beneath the armrest 75. In consequence, the width of the squab 28 can be greater than the distance between the arms. For example, the squab may be 570 mm

(23.5 inches) wide, while the distance between the arms may be 554 mm (21.8 inches). Moreover, there is no in-arm table to add to the width of the seat/seat station.

This provides the occupier of the seat with width where they benefit it most – in the region of their hips when seated and shoulders and/or arms when sleeping – and
5 provides adequate, but reduced, width where it is less important – in the footwell when the seat is reclined. As compared with a conventional arrangement, each passenger occupies less floor space, yet the transverse distance between each passenger is greater (for example, up from 150 mm to 254 mm (6 inches to 10 inches), giving the passenger an increased perception of space). The shell 50 also provides the occupier with a
10 personal enclosed space, this further contributing to a feeling of comfort.

By way of example, the overall width of a single seat 20 and two adjacent footwells 22 in this embodiment is approximately 1458 mm (57.4 inches), and a double seat with a single intermediate footwell is approximately 1532 mm (60.3 inches). A single seat 20 and footwell 22 component has an overall width of approximately 952 mm
15 (37.5 inches).

Special measures may be taken at the front and rear ends of each group of seats to optimise the use of space.

Figure 9 shows an arrangement that can provide an efficient arrangement for a block or group of seats that ends immediately to the rear of a transverse galley 80. This is not
20 required in the arrangements shown in Figures 1 or 2, but may be applicable to installations embodying the invention in other aircraft. The galley 80 has a rear bulkhead wall 82. The aim of the arrangement provided in embodiments of the invention is to minimise the clear distance that must be left between the bulkhead 82 and the first row of seats adjacent thereto.

25 In order to provide a footwell for each of the seats in the front row, a respective recess 84 is formed in the bulkhead 82 in front of each seat. The recess 84 may be of dimensions similar to the footwell recesses described above. Within the galley 80, there is a projecting abutment corresponding to each recess 84. A display monitor 70 can be mounted on the bulkhead above the recess 84.

To minimise the intrusion into the galley space, regions between adjacent recesses 84 can be used to store galley trolleys, and the space above the abutments can be used as a general purpose storage space, including, for example, stowage cupboards.

5 Likewise, when a front row approaches a lavatory enclosure, as labelled 'A' in Figures 1 and 2, or a store cupboard, particular measures can be taken to optimise the use of space. Figures 10 to 12 are views from various vantage points of one such arrangement with respect to a lavatory enclosure 86 at the front of the outer group 14. Once again, the objective is to minimise the longitudinal distance between a rear bulkhead 88 of the enclosure and the front seat of an adjacent block of seats.

10 As with the galley, a recess 90 is formed in the bulkhead 88 to provide a footwell. The corresponding abutment within the lavatory enclosure 86 has a top surface 87 that can provide a table-top surface for a person within the enclosure. Alternatively, the space above the abutment may be enclosed for use as stowage space or housing for equipment.

15 At the rear of a group, the seat can be mounted close to a bulkhead since, in the preferred embodiment, no extra space is needed to allow the seat to recline. If there is sufficient space to gain access to it, the unused rear footwell may provide additional storage space.

Figures 14 to 18 show, by way of example, respective alternative seating layouts (only
20 part of the respective cabins are shown), the layouts being comprised of seating assemblies or components described herein before. Figure 14 shows a 3 aisle seating layout wherein, in each row, there is only one seat 20 and adjacent footwell 22 (or buttress 56) between each aisle. The layout of Figure 14 is suitable for, for example, Airbus A380 and A340 (r.t.m) aircraft or for Boeing B777 and B747 (r.t.m) aircraft. In
25 the following examples, it will be seen that the seats 20 in alternate rows are staggered in a transverse direction with respect to one another, while seats 20 in every other row are substantially in register with one another in the transverse direction (i.e. lie on a common longitudinal axis).

Figure 15 shows a 2 aisle seating layout that is generally similar to the layout of Figure
30 1, except that the central group 114 of seats 20 comprises, in alternate rows, a respective

seating component comprising one seat 20 with an adjacent footwell 22 (or buttress 56) on either side, and then two seats 20 with a common adjacent footwell 22 (or buttress 56) in between the seats 20, the seats 20 in successive rows being staggered in the transverse direction in the manner illustrated above. The layout of Figure 15 is suitable
5 for use in, for example, Boeing B767 (r.t.m) aircraft.

Figure 16 shows a single aisle layout comprising two seating groups 110, 112, one on either side of the aisle 116. Each row of each group 110, 112 comprises two seats 20 each having a respective adjacent footwell 22 (or buttress 56), the seats 20 in successive rows being staggered in the transverse direction. The layout of Figure 16 is suitable for
10 use in, for example, Boeing B767-200 (r.t.m) and Airbus A340 (r.t.m) aircraft.

Figure 17 shows a single aisle layout comprising two seating groups 210, 212, one on either side of the aisle 216. Alternate rows of each group 210, 212, comprise one seat 20 with an adjacent footwell 22 (or buttress 56) on either side, and then two seats 20 with a common adjacent footwell 22 (or buttress 56) in between the seats 20, the seats
15 20 in successive rows being staggered in the transverse direction. The layout of Figure 17 is suitable for use in, for example, Boeing B737 (r.t.m) and Airbus A319 (r.t.m) aircraft.

Figure 18 shows a 2 aisle layout in which each row of each seating group comprises 3 seats 20, or seating positions, each seat having a respective adjacent footwell
20 22/buttress, the seats 20 in successive rows being staggered in the transverse direction. Such a layout would be suitable for, for example, a Boeing B777 or B747 (r.t.m) aircraft.

Figure 19 shows a 2 aisle layout in which each row of each seating group comprises 2 seats 20 (or seating position), each seat 20 having a respective adjacent footwell
25 22/buttress, the seats 20 in successive rows being staggered in the transverse direction as shown.

It will be noted that in the layouts of Figures 14, 15 and 19, each passenger has direct access to an aisle.

Conventionally, 3 seats (usually economy class seats) are sacrificed to install 1 conventional "lie flat at an angle" bed/seat, while 4 seats (usually economy class seats) are sacrificed to install 1 conventional "horizontal" bed. With the present invention, typically about 2.8 seats are sacrificed to install 1 seat 20 with its associated components. In the embodiment of Figure 16, only 2 seats are sacrificed to install 1 seat 20 with associated components. This is particularly attractive to airline operators who typically demand a "horizontal bed" ticket price that is about ten times that of an economy seat. Moreover, the efficient use of space exhibited by the present invention allows the pitch between rows to be reduced in comparison with conventional layouts to the extent that an additional row of seats can be installed in a given cabin area. A typical conventional seat pitch between rows is around 1500 mm (60 inches) whereas, with the preferred embodiments of the invention, the seat pitch between rows may be between approximately 1000 mm to 1150 mm (40 to 46 inches).

It will be understood that various advantageous aspects of the embodiments described herein may be used independently of other aspects of the embodiments. For example, the overhang of the seating position, or seat station, and adjacent footwell; the overlapping of seating stations of successive rows in the transverse direction; the overhanging armrests 75; the tray 60 location and configuration; and the shape and configuration of the shell 50, may each be employed independently of each other and of other aspects of the invention as will be apparent to a skilled person and are not limited to use in connection with seats that recline into a bed state.

The invention is not limited to the embodiments described herein which may be modified or varied without departing from the scope of the invention.

CLAIMS:

1. A seating arrangement for a passenger-carrying vehicle, the arrangement providing a plurality of seating positions, a seating position comprising a seat and a footwell, the
5 footwell of a first seating position being located beside the seat of a second seating position, the second seating position being located generally forward of the first seating position, wherein each seat is operable into a reclined state in which a leg-supporting component of the seat projects into the associated footwell, and wherein the first seating position and the second seating position overlap in a transverse direction.
10
2. A seating arrangement as claimed in Claim 1, wherein each seat is associated with one or more armrests, and wherein at least a respective armrest of the first seating position and of the second seating position overlap in the transverse direction.
- 15 3. A seating arrangement as claimed in Claim 1 or 2, wherein the respective seats of the first seating position and of the second seating position overlap in the transverse direction.
4. A seating position as claimed in Claim 3, wherein each seat includes a back and a
20 base and wherein, when the seats are in the reclined state, the respective backs of the first seating position and of the second seating position overlap in the transverse direction.
5. A seating arrangement as claimed in any preceding claim, wherein each seating
25 position comprises a respective region for receiving a passenger's arms when lying on the seat in its reclined state, and wherein a respective arm-receiving region of the first seating position and of the second seating position overlap in the transverse direction.
6. A seating arrangement as claimed in any preceding claim, wherein said footwells are
30 shaped to become narrower in said forward direction.

7. A seating arrangement as claimed in Claim 6 when dependent on Claim 5, wherein at least some of said arm-receiving regions become wider in said forward direction.
8. A seating arrangement as claimed in any preceding claim, further comprising a shell
5 shaped to define a respective station for one or more of said seats and to define a respective footwell on one or both sides of the or each seat station, wherein the station for the seat of the first seating position and the station for the seat of the second seating position overlap in the transverse direction.
- 10 9. A seating arrangement as claimed in Claim 8, wherein the shell is shaped so that the or each seat station becomes wider, and the or each footwell becomes correspondingly narrower, in said forward direction.
- 15 10. A seating arrangement as claimed in any preceding claim, wherein the second seating position overlaps with the footwell of the first seating position in said transverse direction.
- 20 11. A seating arrangement as claimed in Claim 10, wherein the second seating position overhangs part of the footwell of the first seating position.
12. A seating arrangement as claimed in Claim 10 or 11 when dependent on Claim 3, wherein the seat of the second seating position overhangs part of the footwell of the first seating position.
- 25 13. A seating arrangement as claimed in any one of Claims 10 to 12 when dependent on Claim 4, wherein the back of the seat, when reclined, of the second seating position overhangs part of the footwell of the first seating position.
- 30 14. A seating arrangement as claimed in any one of Claims 10 to 13 when dependent on Claim 5, wherein an arm-receiving region of the second seating position overhangs part of the footwell of the first seating position.

15. A seating arrangement as claimed in any one of Claims 10 to 14 when dependent on Claim 8 or 9, wherein the seat station for the seat of the second seating position overlaps or overhangs part of the footwell of the first seating position.
- 5 16. A seating arrangement as claimed in any one of claims 10 to 15, wherein the footwell of the first seating position becomes narrower in a direction generally away from a ground surface on which the seating arrangement rests during use.
- 10 17. A seating arrangement as claimed in Claim 16, wherein the footwell of the first seating position narrows at an inflected portion, the inflected portion being located between the leg support component of the seat, when reclined, of the first seating position and the back of the seat, when reclined, of the seat of the second seating position.
- 15 18. A seating portion as claimed in Claim 15 or 16, when dependent on Claim 8 or 9, wherein the shell is shaped so that the or each seat station becomes wider, and the or each adjacent footwell becomes correspondingly narrower, in said direction generally away from the ground surface.
- 20 19. A seating arrangement as claimed in any preceding claim, wherein each seat comprises a back, a seat base and the leg-supporting component and, when moving from an upright state to the reclined state, the back, seat base and leg-supporting component each move in a generally forward direction.
- 25 20. A seating arrangement as claimed in any preceding claim, wherein at least one of said seating positions includes an armrest comprising a shelf overhanging the respective seating position in the transverse direction.
- 30 21. A seating arrangement as claimed in Claim 20, wherein said shelf overhangs the respective seat.

22. A seating arrangement as claimed in Claim 20 or 21, when dependent on any one of Claims 8 or 9, wherein said armrests are fixed with respect to the shell.
23. A seating arrangement as claimed in Claim 20 or 21, wherein, when the seat is in the reclined state, the or each respective armrest overhangs the back of the respective seat.
24. A seating arrangement as claimed in any preceding claim, wherein, in the reclined state, each seat provides a respective sleeping surface that is substantially horizontal with the ground surface on which the seating arrangement rests during use.
25. A seating arrangement as claimed in Claim 8 or 9, wherein the shell is shaped to define a respective station for two or more seats in a row.
26. A seating arrangement as claimed in any preceding claim when dependent on Claim 8 or 9, wherein the shell comprises a portion for accommodating the back of a seat, said portion being fixed in a fore-and-aft direction.
27. A seating arrangement as claimed in any preceding claim when dependent on Claim 8 or 9, wherein the shell comprises a portion for accommodating a back rest of a seat, said portion being movable in a fore-and-aft direction.
28. A seating arrangement as claimed in any preceding claim, wherein each footwell is partially enclosed to define a console adjacent one or both respective seats.
29. A seating arrangement as claimed in Claim 28, wherein each console is shaped to define a respective armrest adjacent the or each adjacent seat, the or each armrest overlapping with the footwell beneath the console.
30. A seating arrangement as claimed in Claim 28 or 29, wherein a table comprising one or more table leaves is associated with each console, the table being deployable

from a stowed state in or on the console in which it is disposed generally parallel with the ground surface on which the seating arrangement rests during use.

31. A seating arrangement as claimed in any preceding claim when dependent on Claim 5 8 or 9, wherein the shell includes a respective buttress portion extending between adjacent seats, or adjacent a single seat, the buttress portion being shaped to define a respective footwell.

32. A seating arrangement as claimed in Claim 31 when dependent on any one of 10 claims 28 to 30, wherein the buttress portion provides said console.

33. A seating arrangement as claimed in Claim 32 when dependent on Claim 30, wherein the buttress portion includes a stowage area for said table.

15 34. A seating arrangement as claimed in any preceding claim when dependent on Claim 8, wherein the shell is shaped to define a respective generally upright web portion extending between adjacent seat stations, or adjacent a single seat station.

35. A seating arrangement as claimed in Claim 34, wherein said upright web portion 20 includes a surface area disposed in a plane generally perpendicular to the forward direction, and wherein a monitor is carried by said surface area.

36. A seating arrangement as claimed in Claim 34 or 35, wherein said upright web 25 portion is shaped to provide a screen between passengers seated in adjacent seats.

37. A seating arrangement as claimed in any preceding claim, wherein the footwell of the first seating position extends beyond the base of the seat, when upright, of the second seating position in the forward direction.

30 38. A seating arrangement as claimed in any preceding claim, wherein a plurality of said seating positions are arranged in rows and ranks, the rows being generally

perpendicular to the ranks and being partitioned by one or more aisles, the aisles being generally parallel with the ranks.

39. A seating arrangement as claimed in Claim 38, comprising two aisles, each row
5 comprising a respective single seating position on the outer side of each aisle, alternate rows comprising two seating positions and then three seating positions between the aisles.

40. A seating arrangement as claimed in Claim 38, comprising two aisles, each row
10 comprising a respective single seating position on the outer side of each aisle, alternate rows comprising two seating positions and then one seating position between the aisles.

41. A seating arrangement as claimed in Claim 38, comprising two aisles, each row
15 comprising a respective single seating position on the outer side of each aisle, each row comprising two seating positions between the aisles.

42. A seating arrangement as claimed in Claim 38, comprising two aisles, each row
20 comprising a respective single seating position on the outer side of each aisle, each row comprising three seating positions between the aisles.

43. A seating arrangement as claimed in Claim 38, comprising one aisle, each row
comprising a respective two seating positions on either side of the aisle.

44. A seating arrangement as claimed in Claim 38, comprising one aisle, alternate rows
25 comprising one seating position and then two seating positions on either side of the aisle.

45. A seating arrangement as claimed in Claim 38, comprising three aisles, each row
30 comprising a respective single seating position on both sides of each aisle.

46. A seating arrangement as claimed in any preceding claim, wherein a platform is provided within each footwell, and wherein, when the associated seat is in the reclined

state, the leg-supporting component of the seat closely approaches the platform within the footwell.

47. A seating arrangement as claimed in any preceding claim, wherein each seating
5 position provides a respective sleeping compartment when the respective seat is in the reclined state, each sleeping compartment comprising the respective footwell and a sleeping surface projecting into the footwell, the sleeping surface comprising the respective seat when in the reclined state, and wherein the sleeping compartment of the first seating position and the sleeping compartment of the second seating position
10 overlap in a transverse direction.

48. A seating arrangement as claimed in Claim 47, wherein the sleeping compartment of the second seating position overlaps with the footwell of the sleeping compartment of the first sleeping compartment in the transverse direction.

15

49. A seating component for a passenger-carrying vehicle, the component comprising one or more seats or seat stations and a respective footwell beside one or both sides of the seat, and being further adapted to construct a seating arrangement as claimed in any one of Claims 1 to 48.

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50. A seating component as claimed in Claim 49 wherein the seat or seat station overlaps with the or each adjacent footwell.

50. An aircraft comprising a seating arrangement as claimed in any one of claims 1 to
25 48.

51. A seating arrangement for a passenger-carrying vehicle, the arrangement providing a plurality of sleeping compartments, a sleeping compartment comprising a footwell and a sleeping surface projecting into the footwell, the footwell of a first sleeping
30 compartment being located beside the sleeping surface of a second sleeping compartment, the second sleeping compartment being located generally forward of the

first sleeping compartment, wherein the first sleeping compartment and the second sleeping compartment overlap in a transverse direction.

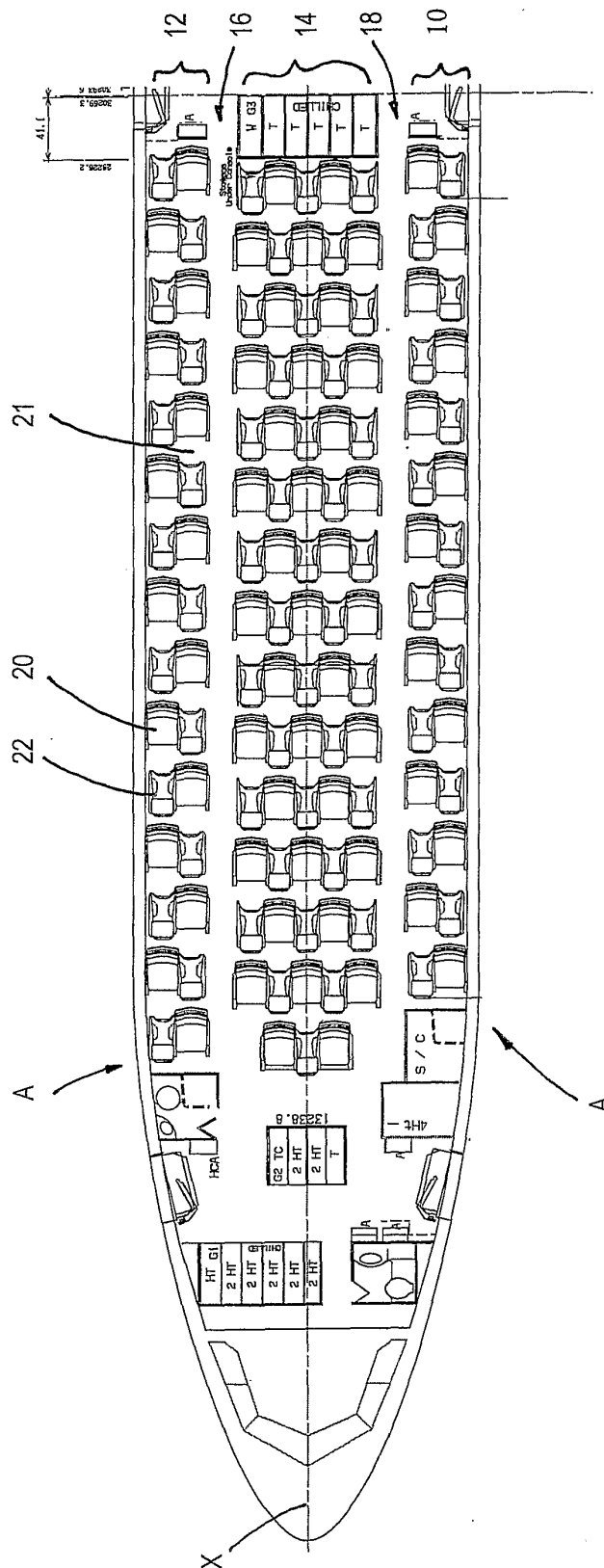


Fig. 1

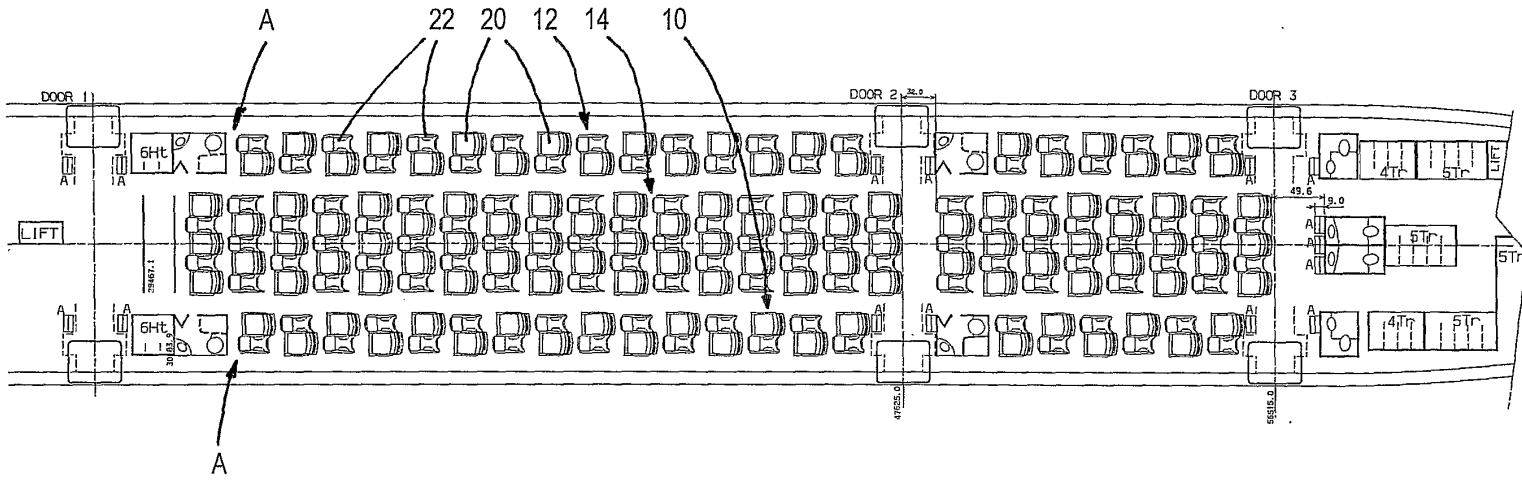


Fig. 2

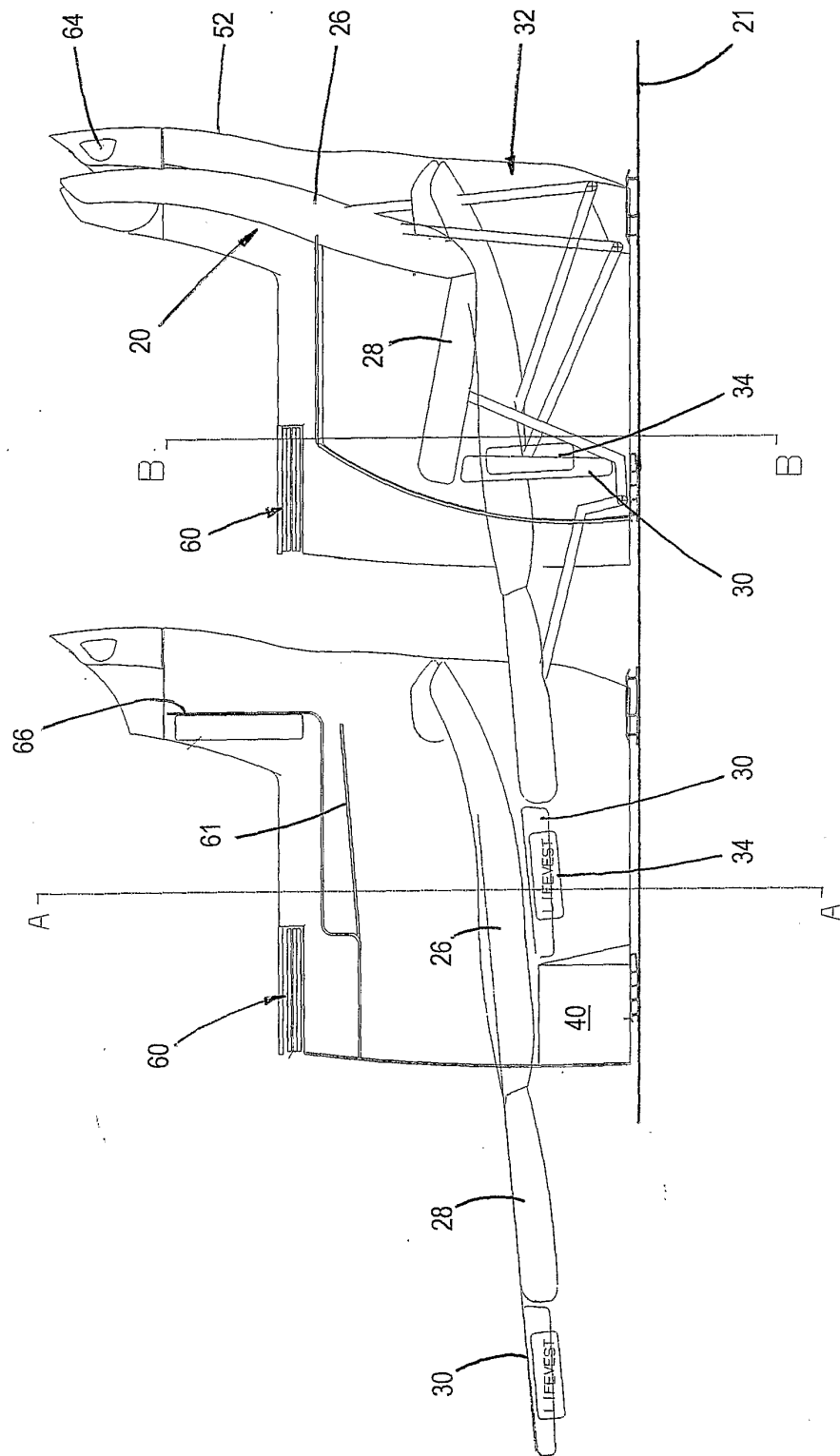


Fig. 3

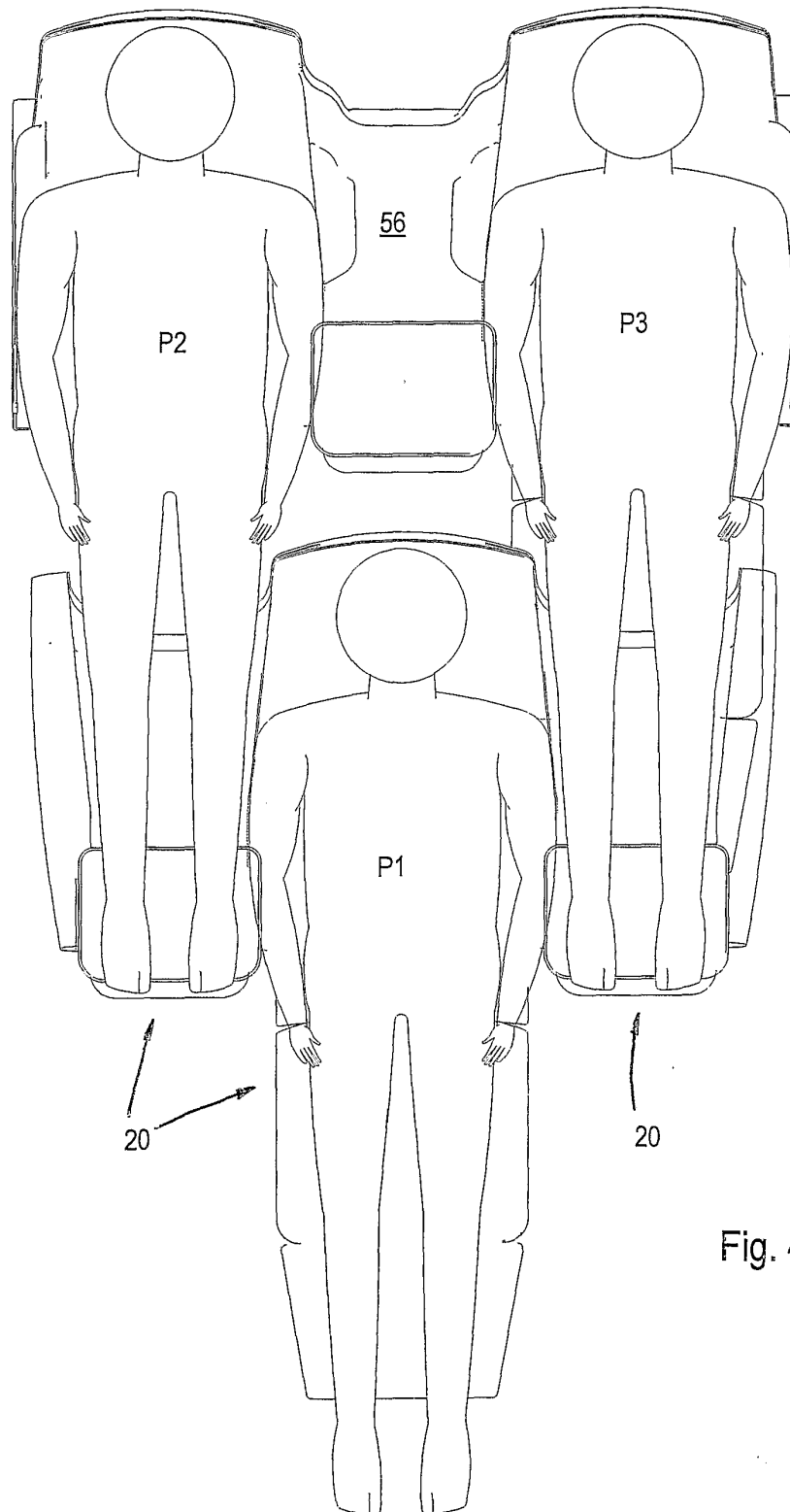


Fig. 4

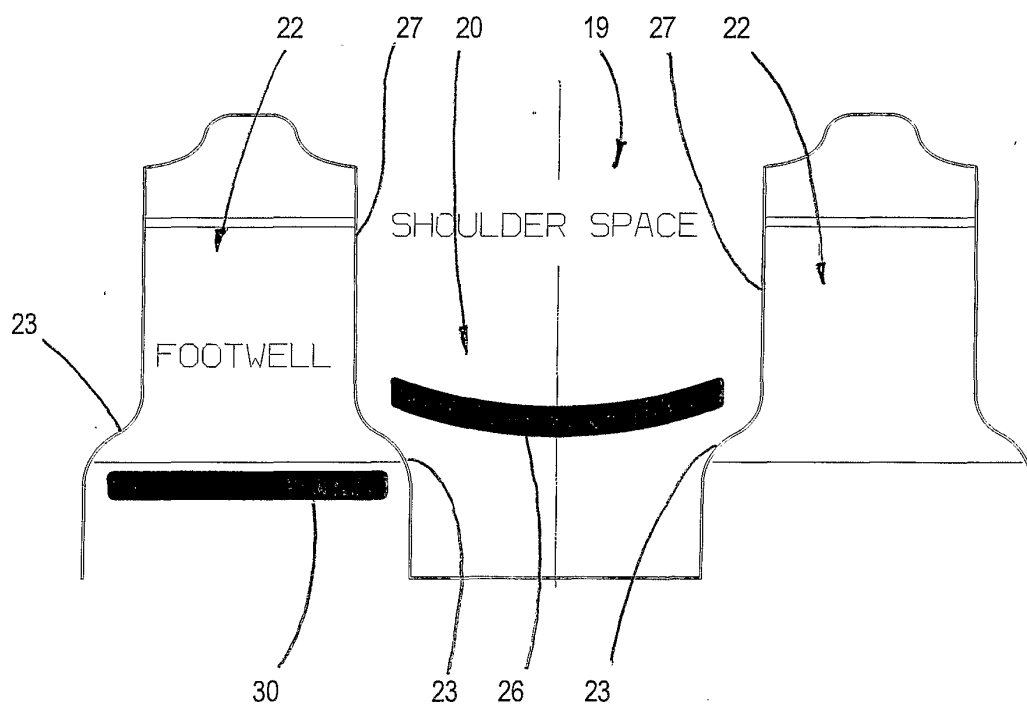


Fig. 5

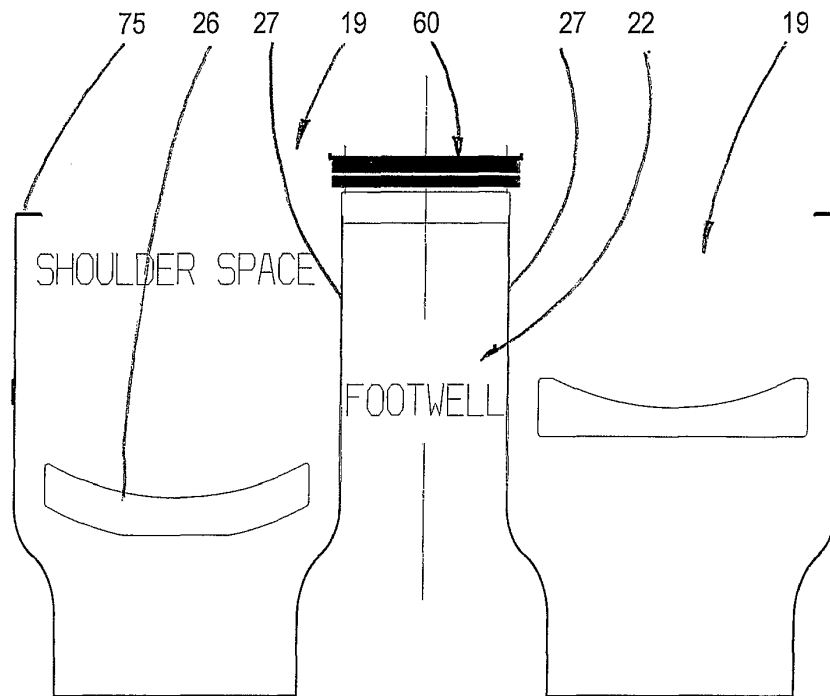
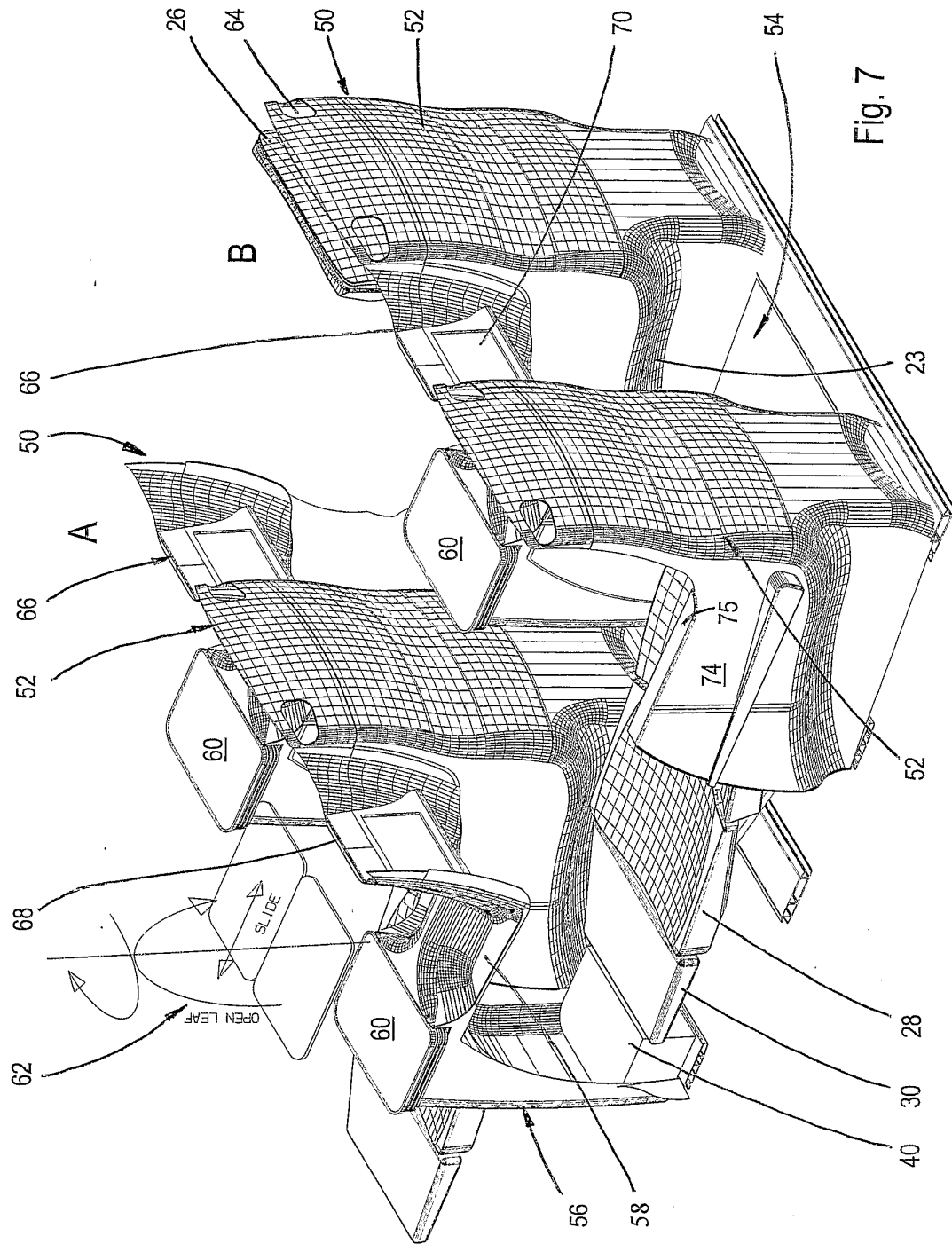


Fig. 6



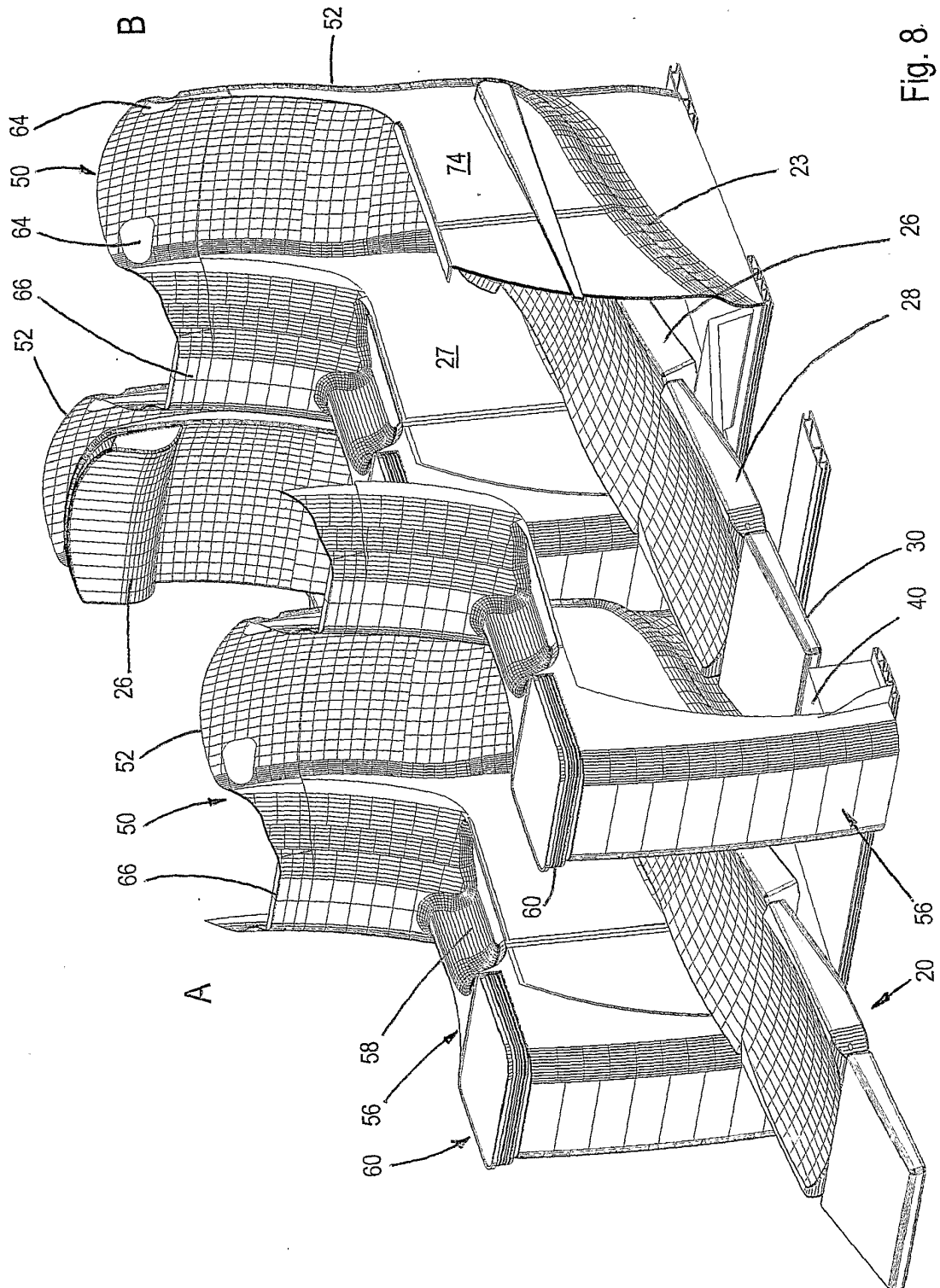
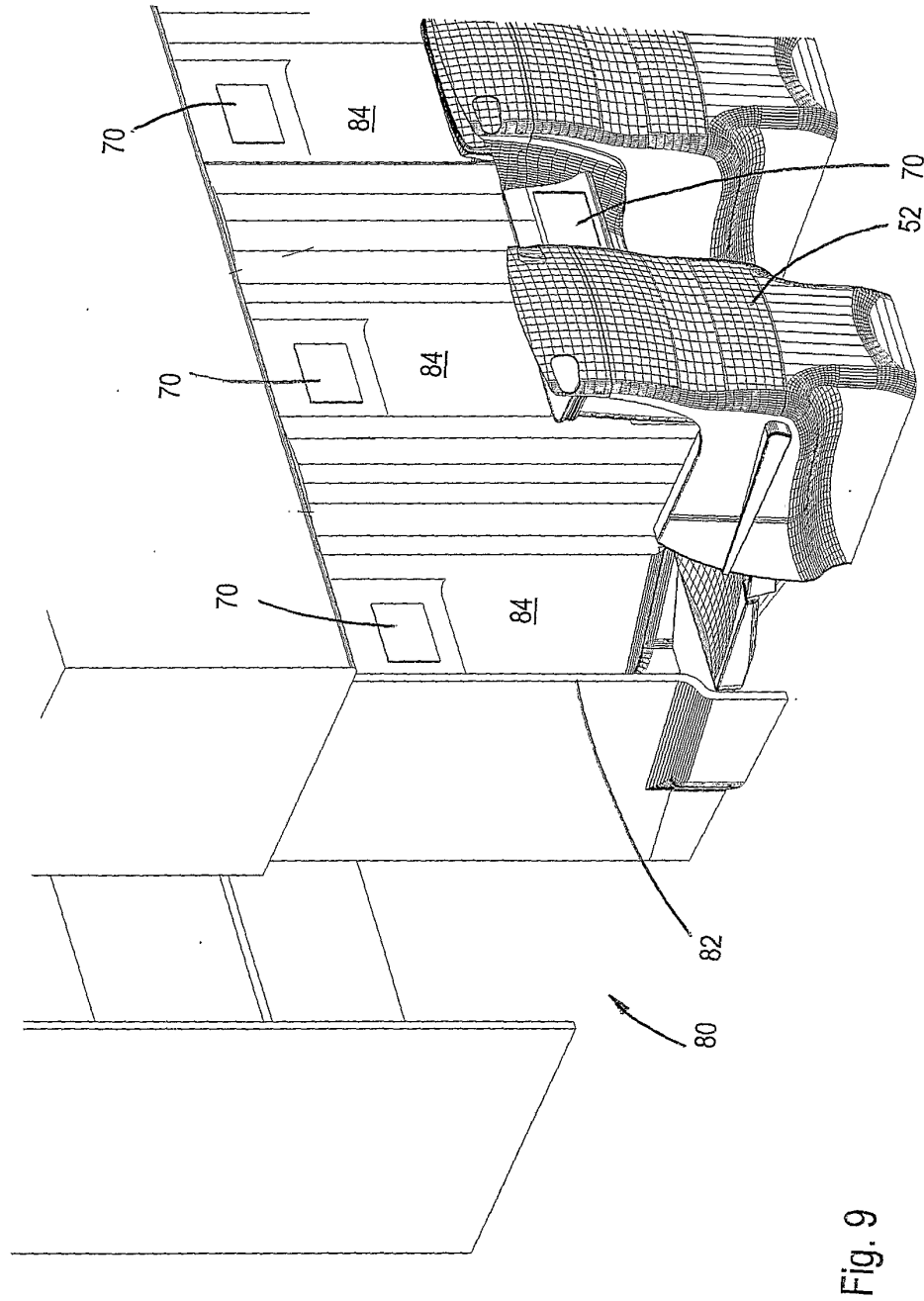


Fig. 8.



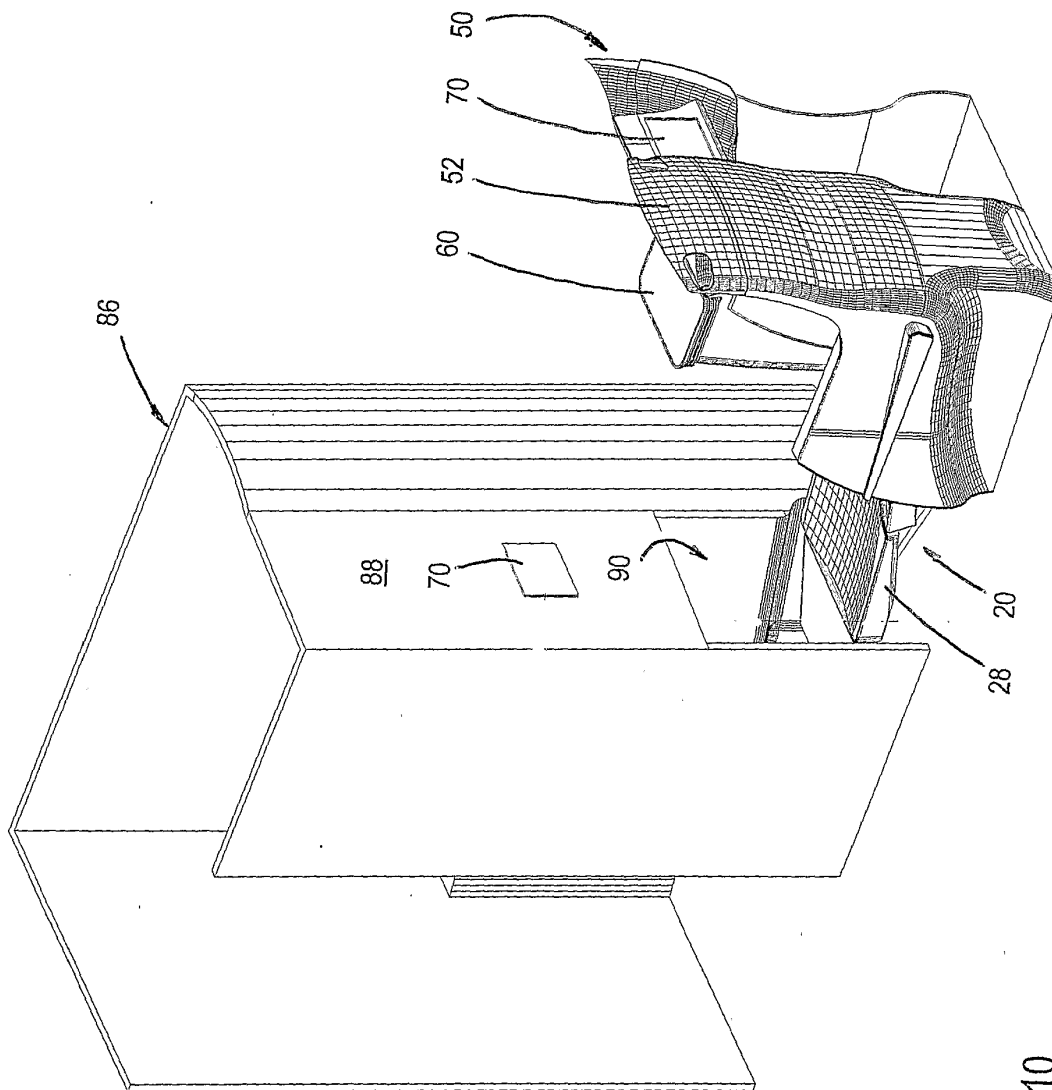


Fig. 10

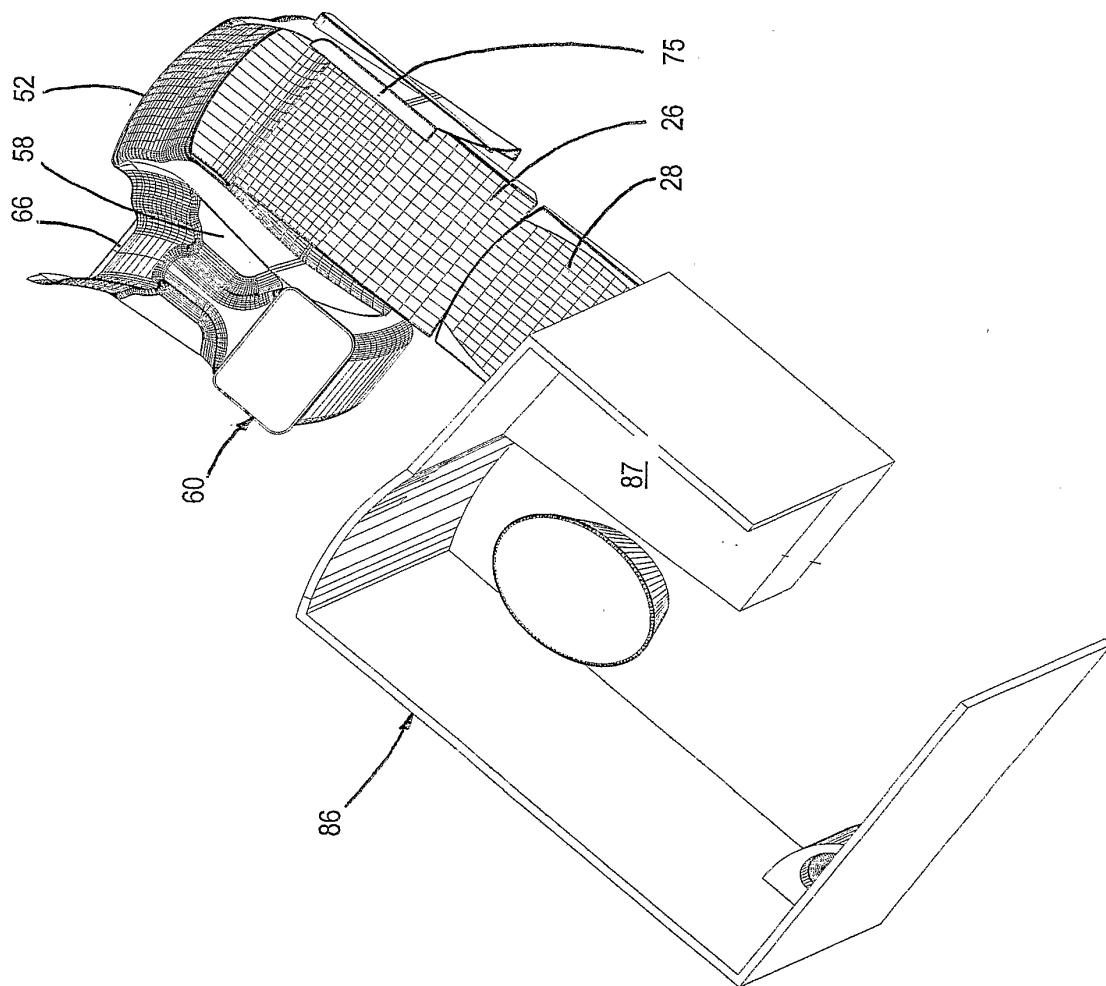
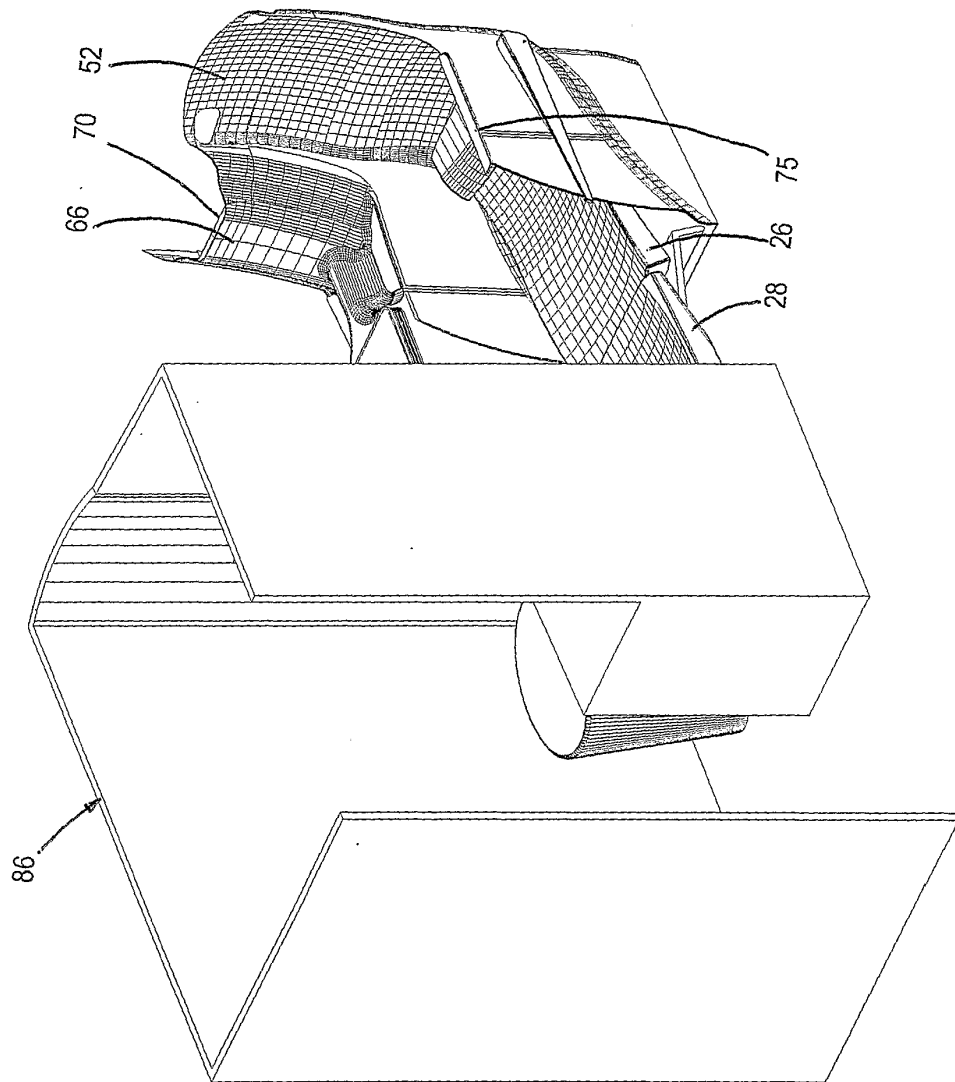


Fig. 11



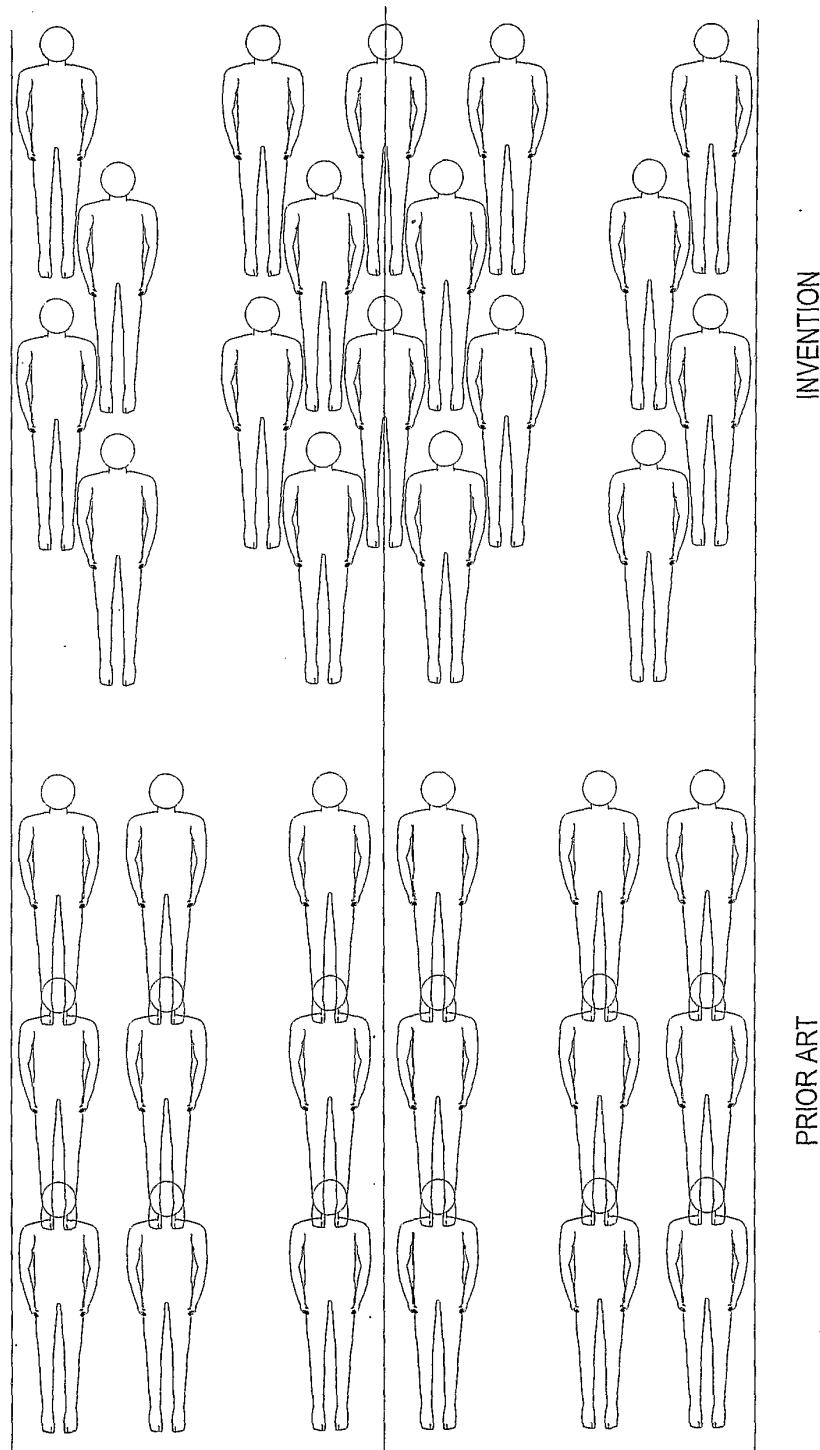


Fig. 13

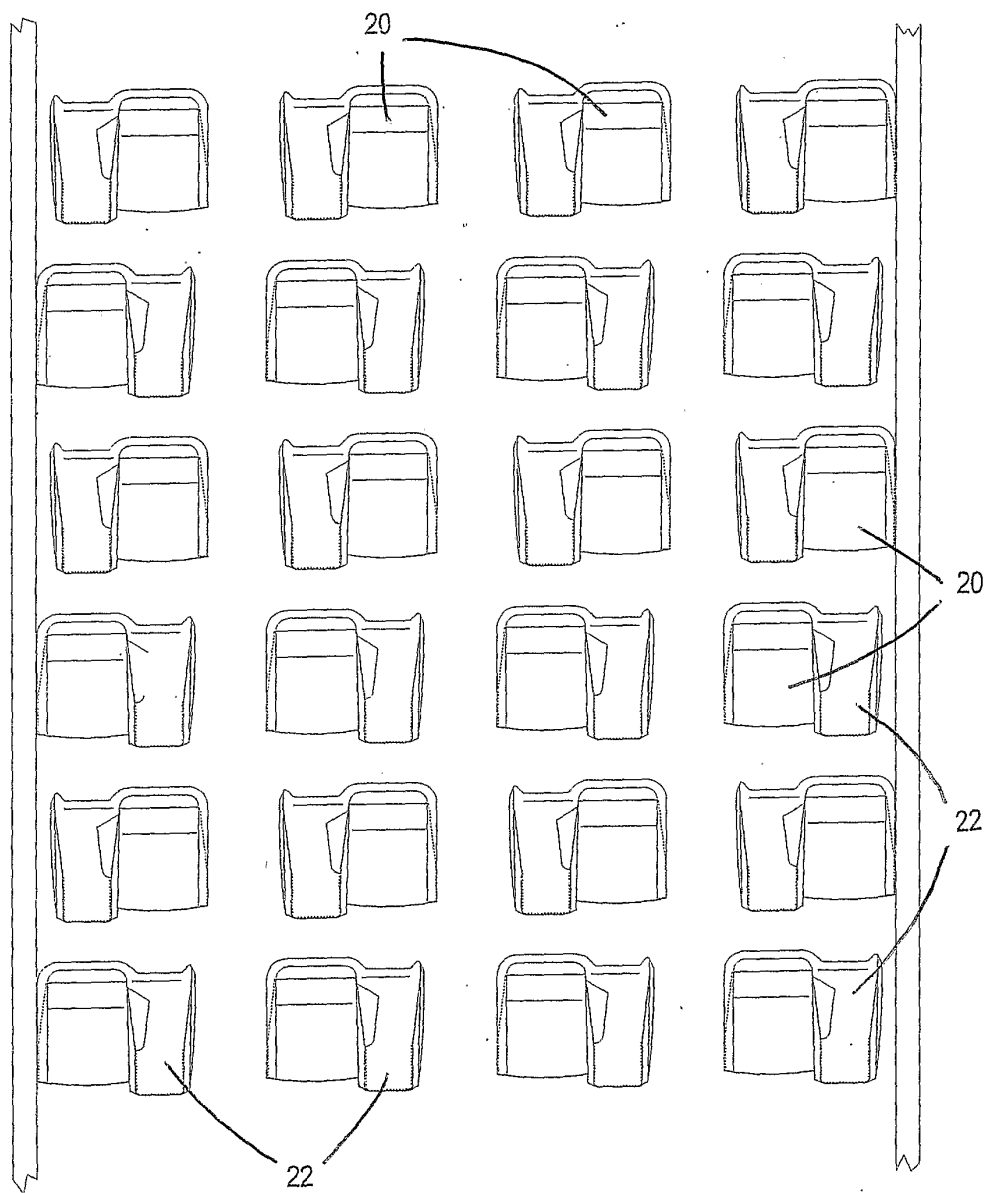


Fig. 14

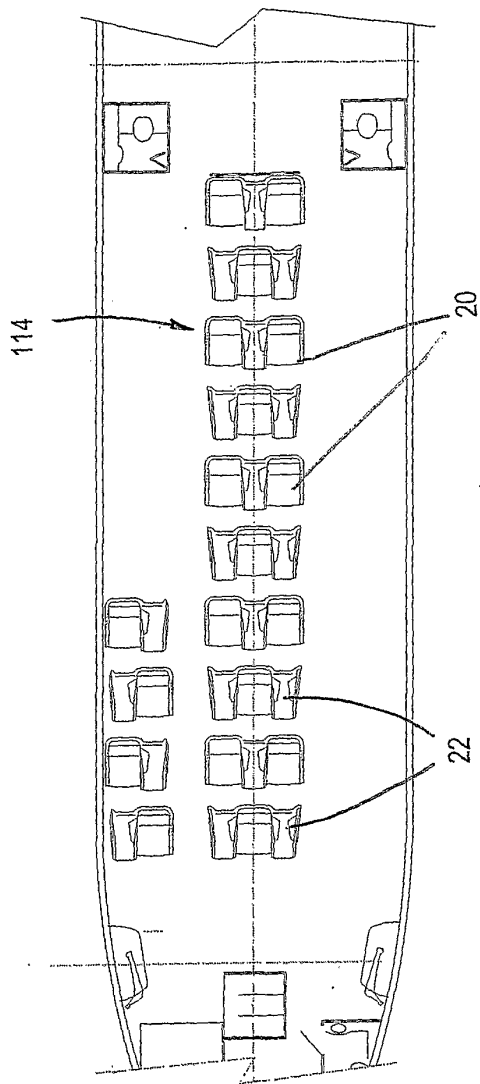


Fig. 15

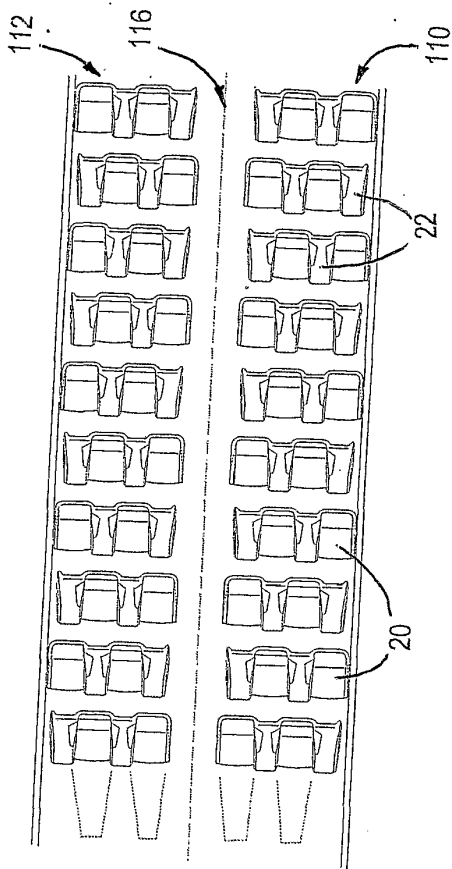


Fig. 16

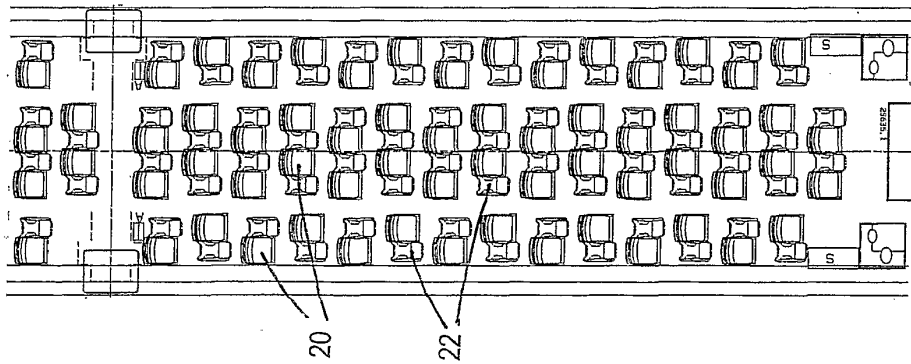


Fig. 19

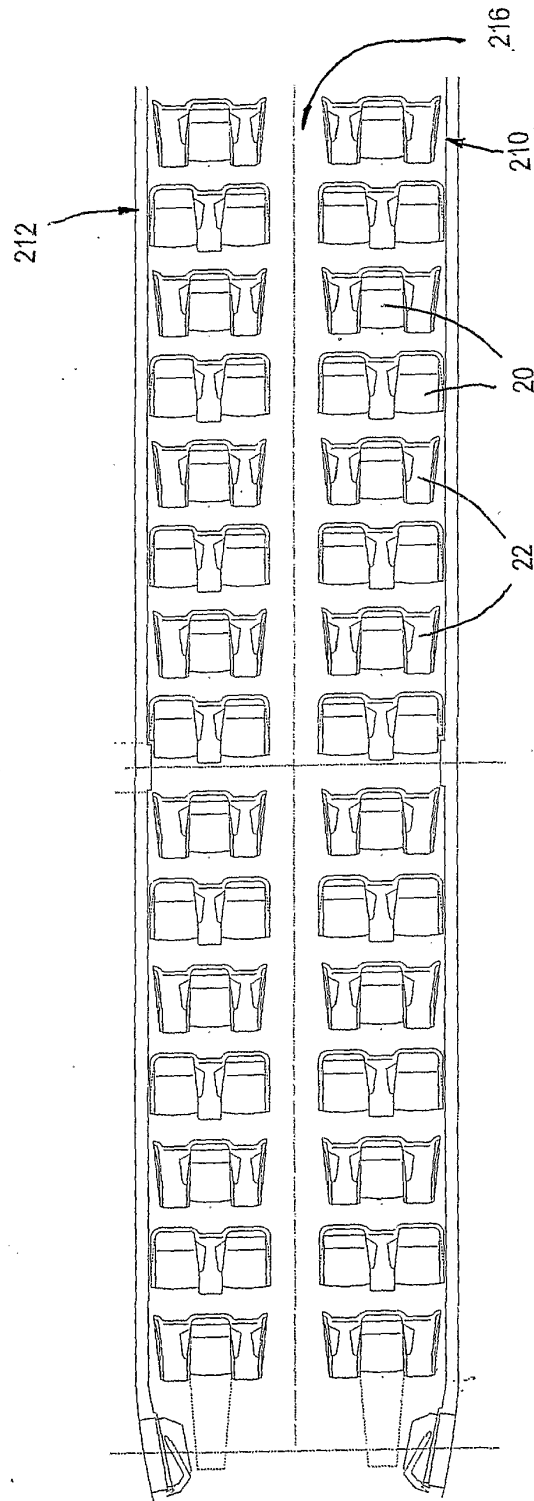


Fig. 17

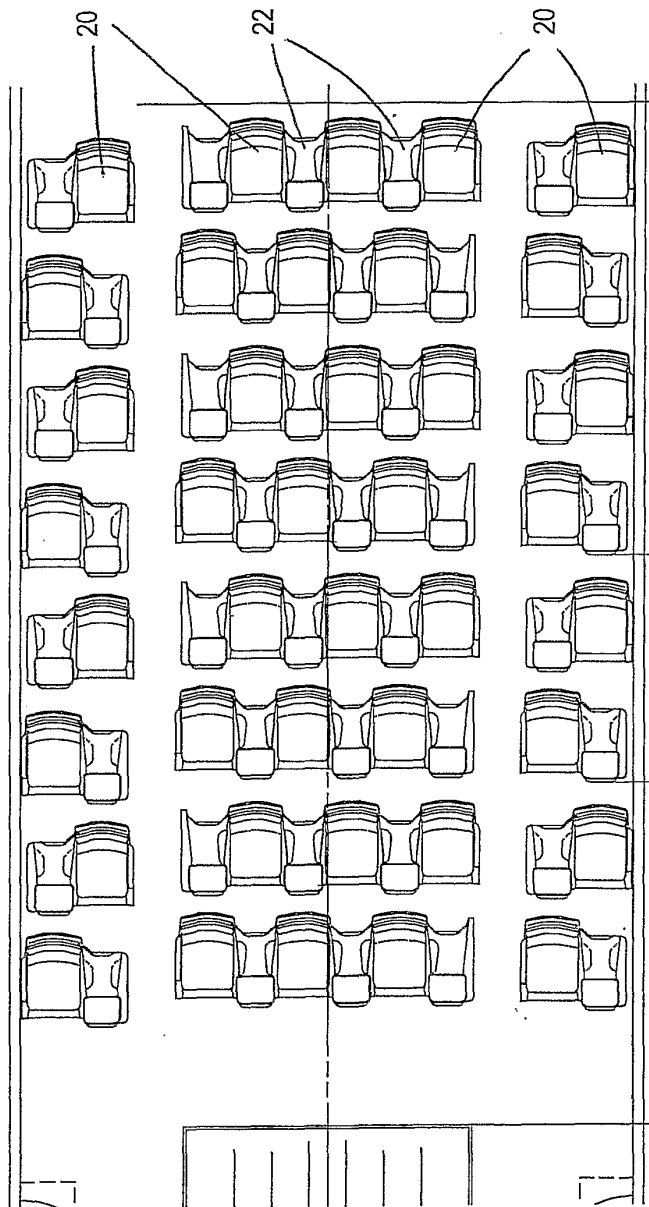


Fig. 18

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		AIRCRAFT INTERIOR LAVATORY		
First Named Inventor/Applicant Name:		Donald F. Cook		
Filer:		James Warren Paul/Laura Martinez		
Attorney Docket Number:		BEALCI-91286		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1600

Electronic Acknowledgement Receipt	
EFS ID:	17011555
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Donald F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Laura Martinez
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	01-OCT-2013
Filing Date:	
Time Stamp:	17:19:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1600
RAM confirmation Number	4542
Deposit Account	062425
Authorized User	PAUL, JAMES W
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)</p>	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Application.pdf	49772	yes	12
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	Document Description		Start		End
	Specification		1		8
	Claims		9		11
	Abstract		12		12
Warnings:					
Information:					
2	Drawings-only black and white line drawings	Drawing.pdf	27096	no	1
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3	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	547580	no	4
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4	Other Reference-Patent/App/Search documents	1-ISR_Written_Opinion.PDF	293702	no	8
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<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

CONTINUATION PATENT APPLICATION

of

DON COOK, LIBERTY HARRINGTON, PHILIPP STEINER and ROBERT K. BRAUER

for

UNITED STATES LETTERS PATENT

on

AIRCRAFT INTERIOR LAVATORY

Client ID/Matter No. **BEALCI-91286**

Sheets of Drawing Figures: ONE (1)

ELECTRONIC FILING

Attorneys
FULWIDER PATTON LLP
Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045

AIRCRAFT INTERIOR LAVATORY

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This continuation application is based upon USSN 13/089,063, filed on April 18, 2011, which claims priority from Provisional Application No. 61/326,198, filed April 20, 2010, and Provisional Application No. 61/346,835, filed May 20, 2010, which are incorporated by reference in their entirety herein.

BACKGROUND OF THE INVENTION

[0002] The present invention relates generally to aircraft enclosures, and more particularly relates to an aircraft cabin enclosure, such as a lavatory, an aircraft closet, or an aircraft galley, for example, including an aircraft cabin structure having an aft portion with a substantially vertically extending exterior aft surface that is substantially not flat in a vertical plane.

[0003] Aircraft lavatories, closets and other full height enclosures commonly have forward walls that are flat in a vertical plane. Structures such as passenger seats installed forward of such aircraft lavatories, closets and similar full height enclosures often have shapes that are contoured in the vertical plane. The juxtaposition of these flat walled enclosures and contoured structures renders significant volumes unusable to both the function of the flat walled lavatory or enclosure and the function of the contoured seat or other structure. Additionally, due to the lack of a provision for structural load sharing, conventional aircraft lavatories require a gap between the lavatory enclosures and adjacent structures, resulting in a further inefficiency in the use of space.

[0004] Aircraft bulkheads, typically separating passenger cabin areas or classes of passenger service, are in common use, and typically have a contour permitting passengers seated behind the bulkhead to extend their feet modestly under the premium seats immediately forward of the bulkhead. These provide a comfort advantage to passengers seated behind the bulkhead, but provide no increased efficiency in the use of space, in that they do not enable the seats fore and aft of the bulkhead to be placed more closely together. Short, floor-mounted stowage boxes, typically no taller than the bottom cushion

of a passenger seat, are often positioned between the flat wall of current lavatories or other enclosures and passenger seats. These provide no improvement to the utility or spatial efficiency of the lavatory or other enclosure. While they do provide some useful stowage for miscellaneous items, they do not provide sufficient additional stowage to provide more space for passenger seating.

[0005] It would be desirable to provide an aircraft lavatory or other enclosure that can reduce or eliminate the gaps and volumes of space previously required between lavatory enclosures and adjacent structures to allow an adjacent structure such as passenger seating installed forward of the lavatory or other enclosure to be installed further aft, providing more space forward of the lavatory or enclosure for passenger seating or other features than has been possible in the prior art. Alternatively, the present invention can provide a more spacious lavatory or other enclosure with no need to move adjacent seats or other structures forward.

[0006] It would also be desirable to provide an aircraft lavatory or other enclosure with a wall to bear loads from an adjacent passenger seating or other structure, permitting elimination of a required gap between the lavatory or other enclosure and the adjacent passenger seating or other structure, making more space available for other uses. In addition, enabling a lavatory or other enclosure to bear loads from an adjacent structure can reduce the combined weight of the lavatory or other enclosure and the adjacent structure.

[0007] It also would be desirable to provide an aircraft lavatory or other enclosure that can reduce or eliminate the gaps and volumes of space previously required between lavatory enclosures and adjacent structures, to allow the installation of an increased number of passenger seats, to increase the value of the aircraft. The present invention meets these and other needs.

SUMMARY OF THE INVENTION

[0008] Briefly, and in general terms, the present invention provides for an enclosure, such as a lavatory, an aircraft closet, or an aircraft galley, for example, for a cabin of an aircraft including a structure having an aft portion with a substantially vertically

extending exterior aft surface that is substantially not flat in a vertical plane. The enclosure structure permits a combination of the enclosure with the structure in a manner that permits significant saving of space in the aircraft, which in turn permits more seats to be installed, or more space to be offered per seat, increasing the value of the aircraft.

[0009] Accordingly, in one presently preferred aspect, the present invention provides for an enclosure unit for a cabin of an aircraft including an aircraft cabin structure having an aft portion with an exterior aft surface that is substantially not flat in a vertical plane. The enclosure unit can be a lavatory, an aircraft closet, or an aircraft galley, for example. In one presently preferred aspect, the enclosure unit includes one or more walls that are taller than an adjacent aircraft cabin structure, the one or more walls defining an interior enclosure space and having a forward wall portion. The forward wall portion is configured to be disposed immediately aft of and adjacent to or abutting the exterior aft surface of the aircraft cabin structure, and the forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aircraft cabin structure.

[0010] In another presently preferred aspect, the enclosure unit includes an enclosure stall unit, and the aircraft cabin structure is a passenger seat installed immediately forward of the enclosure stall unit. In another presently preferred aspect, the forward wall portion of the enclosure unit is configured to accept loads from the aircraft passenger seat. In another presently preferred aspect, the forward wall portion includes a forward projection configured to project over an aft portion of the adjacent passenger seat immediately forward of the enclosure stall unit.

[0011] In another presently preferred aspect, the enclosure is a lavatory, including a lavatory stall unit with one or more walls having a forward wall portion. The one or more walls define an interior lavatory space, and the forward wall portion is configured to be disposed immediately aft of and adjacent to or abutting an aircraft cabin structure having an exterior aft surface having a shape that is substantially not flat in a vertical plane. In a presently preferred aspect, the forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aircraft cabin structure.

[0012] In another presently preferred aspect, the aircraft cabin structure is a passenger seat installed immediately forward of the lavatory stall unit, and the forward wall portion of the lavatory stall unit is configured to accept loads from the passenger seat. In another presently preferred aspect, the forward wall portion includes a forward projection configured to project over an aft portion of the adjacent passenger seat immediately forward of the lavatory stall unit. In another presently preferred aspect, the forward wall portion defines a secondary space in the interior lavatory space in an area forward of an aft-most portion of the forward wall portion. The secondary space can provide an amenity stowage space inside the lavatory stall unit in the area forward of an aft-most portion of the forward wall portion, and can include design elements providing visual space inside the lavatory in the area forward of an aft-most portion of the forward wall portion.

[0013] In another presently preferred aspect, the present invention provides for an assembly of an aircraft enclosure unit and an aircraft cabin structure for an aircraft cabin, the assembly in combination including an aircraft cabin structure having an exterior aft surface having a shape that is substantially not flat in a vertical plane, and an aircraft enclosure unit including at least one wall having a forward wall portion. The one or more walls define an interior enclosure space, the forward wall portion is disposed immediately aft of and adjacent to the aircraft cabin structure, and the forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aircraft cabin structure. In another presently preferred aspect, the aircraft cabin structure is a passenger seat installed immediately forward of the aircraft enclosure unit. In another presently preferred aspect, the forward wall portion is configured to accept loads from the aircraft passenger seat. In another presently preferred aspect, the forward wall portion includes a forward projection configured to project over an aft portion of the adjacent passenger seat immediately forward of the aircraft enclosure unit.

[0014] In another presently preferred aspect, the aircraft enclosure unit is a lavatory stall, and the one or more walls define an interior lavatory space. In another presently preferred aspect, the forward wall portion defines a secondary space in the interior lavatory space in an area forward of an aft-most portion of the forward wall portion.

[0015] In another presently preferred aspect, the present invention provides for an assembly of an aircraft lavatory unit and an aircraft cabin structure for an aircraft cabin, in which the assembly in combination includes an aircraft cabin structure having an exterior aft surface having a shape that is substantially not flat in a vertical plane, and an aircraft lavatory stall unit including one or more walls having a forward wall portion. In another presently preferred aspect, the one or more walls define an interior lavatory space, the forward wall portion is disposed immediately aft of and adjacent to the aircraft cabin structure, and the forward wall portion is shaped to substantially conform to the shape of the exterior aft surface of the aircraft cabin structure. In another presently preferred aspect, the aircraft cabin structure is a passenger seat installed immediately forward of the aircraft lavatory stall unit, and wherein the forward wall portion of the aircraft lavatory stall unit is configured to accept loads from the passenger seat. In another presently preferred aspect, the forward wall portion includes a forward projection configured to project over an aft portion of the adjacent passenger seat immediately forward of the aircraft lavatory stall unit. In another presently preferred aspect, the forward wall portion defines a secondary space in the interior lavatory space in an area forward of an aft-most portion of the forward wall portion.

[0016] These and other aspects and advantages of the invention will become apparent from the following detailed description and the accompanying drawings, which illustrate by way of example the features of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Figure 1 is a schematic diagram of a prior art installation of a lavatory immediately aft of and adjacent to an aircraft passenger seat.

[0018] Fig. 2 is a schematic diagram of an installation of a lavatory according to the present invention immediately aft of and adjacent to or abutting an aircraft cabin passenger seat.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Referring to the drawings, which are provided by way of example, and not by way of limitation, the present invention provides for an enclosure 10, such as a lavatory for a cabin 12 of an aircraft (not shown), although the enclosure may also be an aircraft closet, or an aircraft galley, or similar enclosed or structurally defined spaces, for example. As is illustrated in Fig. 2, the cabin includes a structure 14, and the enclosure may be taller than the cabin structure. The cabin structure can be a passenger seat 16, for example, installed immediately forward of the enclosure and having an aft portion 18 with an exterior aft surface 20 that is substantially not flat in a vertical plane 22. The lavatory includes a lavatory stall unit 24 having one or more walls 26 having a forward wall portion 28. The one or more walls define an interior lavatory space 30, and the forward wall portion is configured to be disposed immediately aft of and adjacent to or abutting the exterior aft surface of the aircraft cabin structure. The forward wall portion has a shape that is substantially not flat in the vertical plane, and preferably is shaped to include a recess 34 such that the forward wall portion substantially conforms to the shape of the exterior aft surface of the aircraft cabin structure. In a presently preferred aspect, the forward wall portion of the lavatory stall unit is configured to accept loads from the passenger seat.

[0020] In another presently preferred aspect, the forward wall portion defines a secondary space 36 in the interior lavatory space in an area 38 forward of an aft-most portion 40 of the forward wall portion, and the forward wall portion includes a forward projection 42 configured to project over the aft portion of the adjacent passenger seat back 44 immediately forward of the lavatory stall unit. The secondary space can include an amenity stowage space 46 inside the lavatory stall unit in the area forward of the aft-most portion of the forward wall portion, and the secondary space can include design elements providing visual space, such as a visual perception of space, inside the lavatory in the area forward of an aft-most portion of the forward wall portion.

[0021] It will be apparent from the foregoing that while particular forms of the invention have been illustrated and described, various modifications can be made without

departing from the spirit and scope of the invention. Accordingly, it is not intended that the invention be limited, except as by the appended claims.

We Claim:

1. An aircraft enclosure for a cabin of an aircraft, comprising:
an enclosure unit including at least one wall defining an interior enclosure space,
said at least one wall including a wall portion configured to be disposed immediately
adjacent to a passenger seat back including an exterior surface having a shape that is
substantially not flat in a vertical plane; and
wherein said wall portion is shaped to substantially conform to the shape of the
exterior surface of passenger seat back, and said wall portion includes a recess configured
to receive the exterior surface of the passenger seat back.
2. The aircraft enclosure of Claim 1, wherein said wall portion is configured
to accept loads from the passenger seat back.
3. The aircraft enclosure of Claim 1, wherein said wall portion includes a
projection configured to project over the passenger seat back.
4. The aircraft enclosure of Claim 1, wherein said enclosure unit is taller than
the passenger seat.
5. The aircraft enclosure of Claim 1, wherein said wall portion includes a
lower portion that extends under the passenger seat back.
6. The aircraft enclosure of Claim 1, wherein said recess in said wall portion
is disposed between an upper wall portion and a lower wall portion.
7. The aircraft enclosure of Claim 1, wherein said enclosure unit comprises a
lavatory unit, and said at least one wall defines an interior lavatory space.
8. The aircraft enclosure of Claim 7, wherein said wall portion defines a
secondary space in said interior lavatory space above the passenger seat back.
9. The aircraft enclosure of Claim 7, wherein said lavatory unit is taller than
the passenger seat.
10. The aircraft enclosure of Claim 7, wherein said wall portion includes a
lower portion that extends under the passenger seat back.
11. An aircraft lavatory for an aircraft, the lavatory comprising:
a forward partition;
an aft partition; and
a lavatory space disposed between the forward partition and the aft partition;

wherein the forward partition comprises:

a forward-extending upper portion;

an aft-extending mid-portion; and

a forward-extending lower portion; and

wherein the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion combine to define an aft-extending recess disposed between the upper forward-extending portion and the forward-extending lower portion.

12. The aircraft lavatory according to Claim 11 wherein the aft extending recess defined by the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition is configured to receive an aft-extending portion of a passenger seat that is disposed immediately forward of the lavatory.

13. The aircraft lavatory according to Claim 11 wherein the aft partition is substantially vertical and substantially planar.

14. The aircraft lavatory according to Claim 11 wherein the width of the lavatory space disposed between the forward partition and the aft partition comprises an upper width, a lower width, and a mid-width, and wherein the upper width and the lower width are both substantially wider than the mid-width.

15. The aircraft lavatory according to Claim 11 wherein the upper forward-extending portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition form a substantially continuous surface.

16. The aircraft lavatory according to Claim 12 wherein said forward-extending upper portion is configured to project over at least a portion of the passenger seat.

17. The aircraft lavatory according to Claim 12 wherein said forward partition is configured to accept loads from the passenger seat.

18. The aircraft lavatory according to Claim 12 wherein said lavatory is taller than the passenger seat.

19. The aircraft lavatory according to claim 11 wherein said aft-extending recess extends along substantially a full width of said forward partition.

20. The aircraft lavatory according to claim 11 wherein said lavatory has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory has varying

lengths along the height of the lavatory, and said lavatory is longer at the top of the lavatory than at the bottom of the lavatory.

AIRCRAFT INTERIOR LAVATORY

ABSTRACT OF THE DISCLOSURE

A lavatory for an aircraft cabin includes a wall having a forward wall portion disposed immediately aft of and substantially conforming to an exterior aft surface of an aircraft cabin structure, such as a passenger seat, that is substantially not flat in a vertical plane. The forward wall portion includes a forward projection over an aft portion of the adjacent passenger seat. The forward wall portion can define a secondary space in the interior lavatory space, which can provide an amenity stowage space, and can include design elements providing visual space.

FIG. 1
(Prior Art)

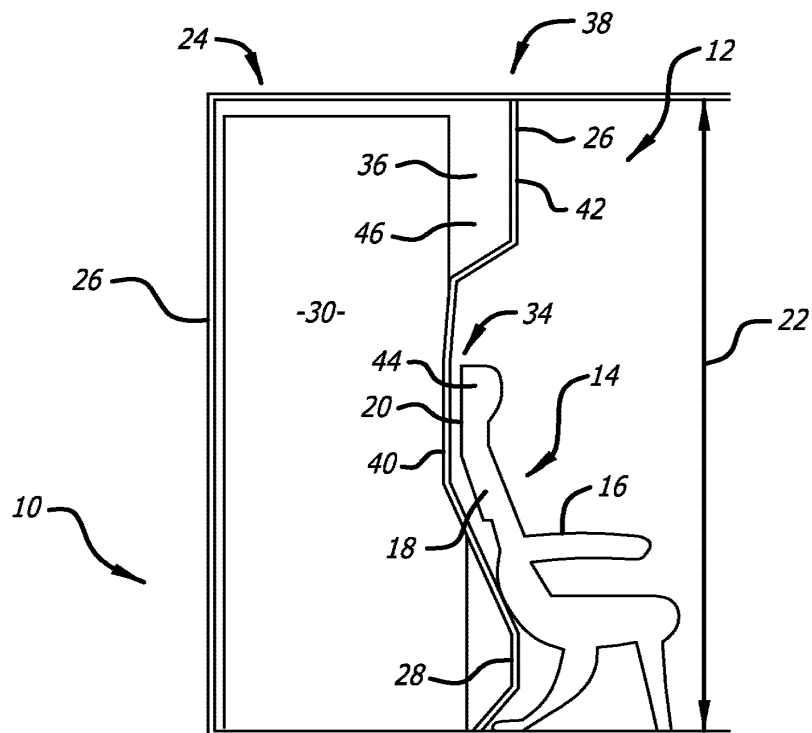
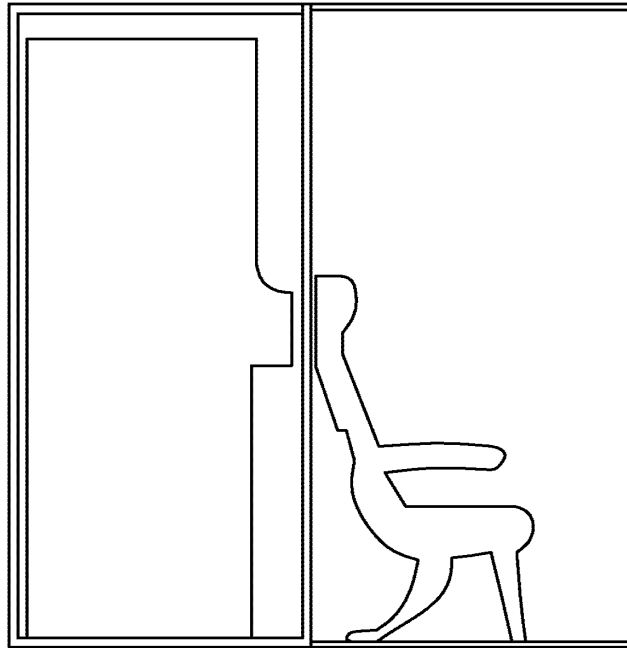


FIG. 2

PATENT APPLICATION FEE DETERMINATION RECORD						Application or Docket Number 14/043,500	
Substitute for Form PTO-875							
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	20	minus 20 = *			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *			OR	x 420 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1600
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							
(Column 1)		(Column 2)		(Column 3)		OTHER THAN SMALL ENTITY	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=
	Application Size Fee (37 CFR 1.16(s))						
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							
<p style="font-size: x-small;">* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p style="font-size: x-small;">** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p style="font-size: x-small;">*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p style="font-size: x-small;">The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>							



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO.	TOT CLAIMS	IND CLAIMS
14/043,500	10/01/2013	3644	1600	BEALCI-91286	20	2

CONFIRMATION NO. 1662

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

FILING RECEIPT



OC000000064445638

Date Mailed: 10/24/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Donald F. Cook, Residence Not Provided;

Applicant(s)

Donald F. Cook, Residence Not Provided;

Power of Attorney: None

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 10/17/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/043,500**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

AIRCRAFT INTERIOR LAVATORY

Preliminary Class

244

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Donald F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

FORMALITIES LETTER



24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Date Mailed: 10/24/2013

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The inventor's oath or declaration or an application data sheet (ADS) naming each inventor has not been submitted. An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor, or a properly executed ADS in compliance with 37 CFR 1.76 identifying each inventor by his or her legal name, mailing address, and residence (if an inventor lives at a location which is different from where the inventor customarily receives mail) is required. If an ADS as set forth above is provided, the filing of the inventor's oath or declaration may be postponed until the application is otherwise in condition for allowance. See 37 CFR 1.53(f).

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of \$ **140** for an undiscounted entity, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is \$ **140** for an undiscounted entity

- \$ **140** Surcharge.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

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Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.

<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

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Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

ELECTRONICALLY FILED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 14/043,500 Confirmation No.: 1662
Inventor : Donald F. Cook et al.
Filed : October 1, 2013
For : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3644
Examiner : To be assigned
Docket No.: : BEALCI-91286
Customer No. : 24201
Date: : October 25, 2013
Mail Stop – MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

**RESPONSE TO NOTICE TO FILE MISSING PARTS
OF NON-PROVISIONAL APPLICATION**

Dear Sir:

In response to the Notice to File Missing Parts of Nonprovisional Application dated October 24, 2013, submitted herewith is the Application Data Sheet. The surcharge of \$140.00 (large entity status) will be paid by credit card with this electronic transmission.

The Commissioner is authorized to charge any deficiencies or credit any overpayments to our Deposit Account No. 06-2425.

Respectfully submitted,
FULWIDER PATTON LLP

By: /james w. paul/
James W. Paul
Registration No. 29,967

JWP:lm
Fulwider Patton LLP
Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: 310-824-5555
Facsimile: 310-824-9696

708812.1



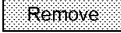
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1						
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Don	F.	Cook			
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
City	Arlington	State/Province	WA	Country of Residence	US	
Mailing Address of Inventor:						
Address 1		7229 Hawksview Drive,				
Address 2						
City	Arlington	State/Province	WA			
Postal Code	98223	Country	US			
Inventor 2						
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Liberty		Harrington			
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
City	Seattle	State/Province	WA	Country of Residence	US	
Mailing Address of Inventor:						
Address 1		2621 22nd Avenue South				
Address 2						
City	Seattle	State/Province	WA			
Postal Code	98144	Country	US			
Inventor 3						
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Philipp		Steiner			
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number		BEALCI-91286	
		Application Number		14/043,500	
Title of Invention		AIRCRAFT INTERIOR LAVATORY			
City	Seattle	State/Province	WA	Country of Residence	US
Mailing Address of Inventor:					
Address 1		2383 NW 89th Place			
Address 2					
City	Seattle	State/Province	WA		
Postal Code	98117	Country i	US		
Inventor 4					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Robert	K.	Brauer		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Seattle	State/Province	WA	Country of Residence	US
Mailing Address of Inventor:					
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Address 2					
City	Seattle	State/Province	WA		
Postal Code	98102-4018	Country i	US		
Inventor 5					Remove
Legal Name					
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	Trevor		Skelly		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	Mercer Island	State/Province	WA	Country of Residence	US
Mailing Address of Inventor:					
Address 1		7425 81st Place SE			
Address 2					
City	Mercer Island	State/Province	WA		
Postal Code	98040	Country i	US		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence Information of this application.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286	
		Application Number	14/043,500	
Title of Invention	AIRCRAFT INTERIOR LAVATORY			
Customer Number	24201			
Email Address	docketla@fulpat.com		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	AIRCRAFT INTERIOR LAVATORY		
Attorney Docket Number	BEALCI-91286	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	1	Suggested Figure for Publication (if any)	

Publication Information:

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	24201		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.			
Prior Application Status	Expired	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/326198	2010-04-20
Prior Application Status	Expired	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/346835	2010-05-20
Prior Application Status	Pending	<input type="button" value="Remove"/>	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/089063	2011-04-18
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

<input checked="" type="radio"/> Assignee	<input type="radio"/> Legal Representative under 35 U.S.C. 117	<input type="radio"/> Joint Inventor
<input type="radio"/> Person to whom the inventor is obligated to assign.	<input type="radio"/> Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒

Organization Name B/E Aerospace, Inc.

Mailing Address Information For Applicant:

Address 1		1400 Corporate Center Way	
Address 2			
City	Wellington	State/Province	FL
Country	US	Postal Code	33414
Phone Number		Fax Number	

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1				
Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).				
If the Assignee is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Signature	/James W. Paul/		Date (YYYY-MM-DD)	2013-10-25
First Name	James	Last Name	Paul	Registration Number
29967				
Additional Signature may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:	14043500			
Filing Date:	01-Oct-2013			
Title of Invention:	AIRCRAFT INTERIOR LAVATORY			
First Named Inventor/Applicant Name:	Donald F. Cook			
Filer:	James Warren Paul/Laura Martinez			
Attorney Docket Number:	BEALCI-91286			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Late Filing Fee for Oath or Declaration	1051	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				140

Electronic Acknowledgement Receipt	
EFS ID:	17229953
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Donald F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Laura Martinez
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	25-OCT-2013
Filing Date:	01-OCT-2013
Time Stamp:	14:23:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$140
RAM confirmation Number	654
Deposit Account	062425
Authorized User	PAUL, JAMES W
<p>The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)</p> <p>Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)</p>	

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	Rsp_to_Missing_Parts.pdf	14686	no	1
			f0ffa8e212a1f7f270d98be261d22b4dbee696a0		
Warnings:					
Information:					
2	Application Data Sheet	ADS.pdf	135501	no	8
			a47f705551e0e493dd559a37df9b03152b7d96a5		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30256	no	2
			a5549c19b2fc2fe0c5a3f4e621a955d015f801d5		
Warnings:					
Information:					
Total Files Size (in bytes):			180443		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

ELECTRONICALLY FILED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 14/043,500 Confirmation No.: 1662
Inventor : Don F. Cook
Filed : October 1, 2013
For : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3644
Examiner : To be assigned
Docket No.: : BEALCI-91286
Customer No. : 24201
Date: : February 11, 2014

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Dear Sir:

Filed herewith is an updated Application Data Sheet in the above application for which issuance of a corrected filing receipt is respectfully requested.

As stated in the Cross-References to Related Applications in the above-captioned application, this continuation application is based upon Application No. 13/089,063, filed on April 18, 2011. That application issued as U.S. Patent No. 8,590,838 on November 26, 2013. The undersigned is attorney of record in Application No. 13/089,063, and filed the above-captioned application on behalf of Applicant B/E Aerospace, Inc.

B/E Aerospace, Inc., a corporation, is the assignee of the entire right, title and interest to parent Application No. 13/089,063. This interest is evidenced by a chain of title from the inventors of Application No. 13/089,063 to the current assignee as follows:

1. From Don Cook, Liberty Harrington, Philipp Steiner and Robert K. Brauer to BE Intellectual Property, Inc. by way of an Assignment recorded in the Patent and Trademark Office at Reel 026145, Frame 0191.

2. From Trevor Skelly to BE Intellectual Property, Inc. by way of an Assignment recorded in the Patent and Trademark Office at Reel 027067, Frame 0864.

3. From BE Intellectual Property, Inc. to B/E Aerospace, Inc. by way of an Assignment recorded in the Patent and Trademark Office at Reel 031366, Frame 0932.

The undersigned is authorized to act on behalf of the Assignee.

It is not believed that any fees are due in this filing. If any fees are due, please charge our Deposit Account No. 062425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /james w. paul/
James W. Paul
Registration No. 29,967

JWP:rlf
Fulwider Patton LLP
Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: 310-824-5555
Facsimile: 310-824-9696

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Don	F.	Cook		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	<u>Arlington</u>	State/Province	<u>WA</u>	Country of Residence	<u>US</u>
Mailing Address of Inventor:					
Address 1	<u>7229 Hawksview Drive</u>				
Address 2					
City	<u>Arlington</u>	State/Province	<u>WA</u>		
Postal Code	<u>98223</u>	Country i	<u>US</u>		
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	<u>Liberty</u>		<u>Harrington</u>		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	<u>Seattle</u>	State/Province	<u>WA</u>	Country of Residence	<u>US</u>
Mailing Address of Inventor:					
Address 1	<u>2621 22nd Avenue South</u>				
Address 2					
City	<u>Seattle</u>	State/Province	<u>WA</u>		
Postal Code	<u>98144</u>	Country i	<u>US</u>		
Inventor 3					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	<u>Philipp</u>		<u>Steiner</u>		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		BEALCI-91286	
		Application Number		14/043,500	
Title of Invention		AIRCRAFT INTERIOR LAVATORY			
City	<u>Seattle</u>	State/Province	<u>WA</u>	Country of Residence	<u>US</u>
Mailing Address of Inventor:					
Address 1		<u>2383 NW 89th Place</u>			
Address 2					
City	<u>Seattle</u>	State/Province	<u>WA</u>		
Postal Code	<u>98117</u>	Country i	<u>US</u>		
Inventor 4					<input type="button" value="Remove"/>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	<u>Robert</u>	<u>K.</u>	<u>Brauer</u>		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	<u>Seattle</u>	State/Province	<u>WA</u>	Country of Residence	<u>US</u>
Mailing Address of Inventor:					
Address 1		<u>2305 13th Ave. E</u>			
Address 2					
City	<u>Seattle</u>	State/Province	<u>WA</u>		
Postal Code	<u>98102-4018</u>	Country i	<u>US</u>		
Inventor 5					<input type="button" value="Remove"/>
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	<u>Trevor</u>		<u>Skelly</u>		
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					
City	<u>Mercer Island</u>	State/Province	<u>WA</u>	Country of Residence	<u>US</u>
Mailing Address of Inventor:					
Address 1		<u>7425 81st Place SE</u>			
Address 2					
City	<u>Mercer Island</u>	State/Province	<u>WA</u>		
Postal Code	<u>98040</u>	Country i	<u>US</u>		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.					<input type="button" value="Add"/>

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence information of this application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
Customer Number	24201		
Email Address	docketla@fulpat.com	<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	AIRCRAFT INTERIOR LAVATORY		
Attorney Docket Number	BEALCI-91286	Small Entity Status Claimed	<input type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	1	Suggested Figure for Publication (if any)	

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

<input type="checkbox"/> Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/> Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	24201		

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status		<u>Patented</u>		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14043500	Continuation of	13089063	2011-04-18	8590838	2013-11-26
Prior Application Status		<u>Expired</u>		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13089063	Claims benefit of provisional	61346835	2010-05-20		
Prior Application Status		<u>Expired</u>		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
13089063	Claims benefit of provisional	61326198	2010-04-20		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

<p>This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.</p> <p><input type="checkbox"/> NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.</p>
--

Authorization to Permit Access:

<input checked="" type="checkbox"/> Authorization to Permit Access to the Instant Application by the Participating Offices
<p>If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.</p> <p>In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.</p> <p>In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.</p>

Applicant Information:

<p>Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.</p>
--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Applicant 1			
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p> <p style="text-align: right;"><input type="button" value="Clear"/></p>			
<input checked="" type="radio"/> Assignee		<input type="radio"/> Legal Representative under 35 U.S.C. 117	
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor : <input type="text"/>			
If the Applicant is an Organization check here. <input checked="" type="checkbox"/>			
Organization Name	<u>B/E Aerospace, Inc.</u>		
Mailing Address Information For Applicant:			
Address 1	<u>1400 Corporate Center Way</u>		
Address 2			
City	<u>Wellington</u>	State/Province	<u>FL</u>
Country	<u>US</u>	Postal Code	<u>33414</u>
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

<p>Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.</p>
Assignee 1
<p>Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.</p>
<p>If the Assignee or Non-Applicant Assignee is an Organization check here. <input checked="" type="checkbox"/></p>

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Organization Name	<u>B/E Aerospace, Inc.</u>
-------------------	----------------------------

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1		<u>1400 Corporate Center Way</u>	
Address 2			
City	<u>Wellington</u>	State/Province	<u>FL</u>
Country ⁱ	<u>US</u>	Postal Code	<u>33414</u>
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Signature	<u>/James W. Paul/</u>		Date (YYYY-MM-DD)	2014-02-11	
First Name	James	Last Name	Paul	Registration Number	29967

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	18196776
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Robert Fiore
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	13-FEB-2014
Filing Date:	01-OCT-2013
Time Stamp:	13:26:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Corrected Filing Receipt	91286_Request_for_Corrected_Filing_Receipt.pdf	17003 87e3ed6c980851134eb8b3ccf242cdee147c96b9	no	2

Warnings:

Information:

2	Application Data Sheet	91286_Corrected_ADS.pdf	205891 8eed7fe93554455e7d87cbb160a5e8feb2a99ea	no	8
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
Total Files Size (in bytes):			222894		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/043,500				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720			
TOTAL CLAIMS (37 CFR 1.16(i))	20	minus 20 = *				x 80 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *				x 420 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1600			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE				TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE				TOTAL ADD'L FEE	
<p style="font-size: x-small;">* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p style="font-size: x-small;">** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p style="font-size: x-small;">*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p style="font-size: x-small;">The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.</p>										



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/043,500	10/01/2013	3644	1740	BEALCI-91286	20	2

CONFIRMATION NO. 1662

UPDATED FILING RECEIPT



OC000000066745706

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Date Mailed: 03/06/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Don F. Cook, Arlington, WA;
Liberty Harrington, Seattle, WA;
Philipp Steiner, Seattle, WA;
Robert K. Brauer, Seattle, WA;
Trevor Skelly, Mercer Island, WA;

Applicant(s)

B/E AEROSPACE, INC., WELLINGTON, FL

Assignment For Published Patent Application

B/E AEROSPACE, INC., WELLINGTON, FL

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 13/089,063 04/18/2011 PAT 8590838
which claims benefit of 61/346,835 05/20/2010
and claims benefit of 61/326,198 04/20/2010

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 10/17/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/043,500**

Projected Publication Date: 06/12/2014

Non-Publication Request: No

Early Publication Request: No
Title

AIRCRAFT INTERIOR LAVATORY

Preliminary Class

244

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

NOTICE



Date Mailed: 03/06/2014

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Don F. Cook
Liberty Harrington
Philipp Steiner
Robert K. Brauer
Trevor Skelly



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

24201	7590	03/13/2014
FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045		

EXAMINER	
LEE, BENJAMIN P	

ART UNIT	PAPER NUMBER
3641	

NOTIFICATION DATE	DELIVERY MODE
03/13/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketla@fulpat.com
eOfficeAction@fulpat.com

Office Action Summary	Application No. 14/043,500	Applicant(s) COOK ET AL.	
	Examiner BENJAMIN P. LEE	Art Unit 3641	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 1-20 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 10/1/2013 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date 10/1/2013.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Drawings

1. The drawings submitted 10/1/2013 are acknowledged and acceptable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under pre-AIA 35 U.S.C. 102b as being anticipated by Pascasio et al. (U.S. Patent 5,716,026).
3. In regards to claim 1, Pascasio et al (henceforth referred to as Pascasio) disclose an aircraft enclosure for a cabin of an aircraft, comprising:
an enclosure unit including at least one wall defining an interior enclosure space.
See the wall units in figure 2 of Pascasio (items 40);

said at least one wall including a wall portion configured to be disposed immediately adjacent to a passenger seat back including an exterior surface having a shape that is substantially not flat in a vertical plane (see figures); and wherein said wall portion is shaped to substantially conform to the shape of the exterior surface of passenger seat back, and said wall portion includes a recess configured to receive the exterior surface of the passenger seat back. The walls of the Pascasio invention are shaped to conform to the shape of the seat backs and include a recessed portion that allows for the seat back to recline.

4. In regards to claim 2, Pascasio disclose wall portion is configured to accept loads from the passenger seat back. The wall of Pascasio is capable of accepting some loads from the seat.

5. In regards to claim 3, Pascasio disclose wall portion includes a projection configured to project over the passenger seat back (see figure).

6. In regards to claim 4, Pascasio disclose enclosure unit is taller than the passenger seat (see figure).

7. In regards to claim 5, Pascasio et al disclose wall portion includes a lower portion that extends under the passenger seat back. The wall of Pascasio includes a portion that angles “under” the seat back as depicted.

8. In regards to claim 6, Pascasio disclose recess in said wall portion is disposed between an upper wall portion and a lower wall portion. The wall of Pascasio includes an upper portion that hangs over the seat back and a lower portion that angles under the seat back and together form a recess.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 7-20 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Pascasio et al. (U.S. Patent 5,716,026) in view of Thompson et al. (U.S. Patent Application Publication 2007/0241232).

10. In regards to claim 7, Pascasio fails to disclose that the enclosure unit comprises a lavatory unit, and said at least one wall defines an interior lavatory space. Pascasio fails to explicitly teach that a lavatory is positioned behind the aft most seat in any of the figures. However, Thompson et al (henceforth referred to as Thompson) teaches a lavatory space on an aircraft that incorporates a recess in a wall to allow a portion of a seat to extend into it (see figure 12). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to provide a lavatory behind the aft most seat of Pascasio as taught by Thompson and accommodate portions of the seat, to provide a more efficient use of space.

11. In regards to claim 8, Pascasio disclose wall portion defines a secondary space in said interior lavatory space above the passenger seat back. The configuration of the wall as modified provides a space above the protruding seat portion.

12. In regards to claim 9, Pascasio disclose lavatory unit is taller than the passenger seat (see figures).

13. In regards to claim 10, Pascasio disclose wall portion includes a lower portion that extends under the passenger seat back (See figures).

14. In regards to claim 11, Pascasio teaches a space on an aircraft with a conforming wall shaped to accommodate a seat back, but fails to explicitly teach that the space is an aircraft lavatory for an aircraft. However, Thompson teaches a lavatory space on an aircraft that incorporates a recess in a wall to allow a portion of a seat to extend into it (see figure 12). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to provide a lavatory behind the aft most seat of Pascasio as taught by Thompson and accommodate portions of the seat, to provide a more efficient use of space.

the lavatory comprising:

- a forward partition. The lavatory of Pascasio as modified with Thompson includes a forward wall or partition and an aft wall or partition;

- Pascasio as modified teaches a lavatory space disposed between the forward partition and the aft partition;

- wherein the forward partition comprises: a forward-extending upper portion. The conforming wall of Pascasio includes a portion that protrude in the forward direction as depicted;

- an aft-extending mid-portion. The portion that angles aft to accommodate the seat back constitutes an aft extending mid portion as depicted in figures 1 and 2;

and a forward-extending lower portion. The lower portion of the conforming wall of Pascasio extends in the forward direction "under" the seat back; and wherein the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion combine to define an aft-extending recess disposed between the upper forward-extending portion and the forward-extending lower portion. The sections of the wall of Pascasio define the recess.

15. In regards to claim 12, Pascasio discloses that the aft extending recess defined by the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition is configured to receive an aft-extending portion of a passenger seat that is disposed immediately forward of the lavatory (see figures).

16. In regards to claim 13, Pascasio discloses that the aft partition is substantially vertical and substantially planar. Note that the opposite wall portion of the lavatory (away from the seat) as modified by Thompson, is vertical and planar.

17. In regards to claim 14, Pascasio discloses that the width of the lavatory space disposed between the forward partition and the aft partition comprises an upper width, a lower width, and a mid-width, and wherein the upper width and the lower width are both substantially wider than the mid-width. As depicted and modified by Thompson, the wall of Pascasio creates the claimed dimensions.

18. In regards to claim 15, Pascasio discloses that the upper forward- extending portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition form a substantially continuous surface (See the wall surface of Pascasio in the figures).

19. In regards to claim 16, Pascasio disclose forward-extending upper portion is configured to project over at least a portion of the passenger seat (see figures).

20. In regards to claim 17, Pascasio discloses that the forward partition is configured to accept loads from the passenger seat. The wall of Pascasio is capable of accepting some loads from the seat.

21. In regards to claim 18, Pascasio discloses that the lavatory is taller than the passenger seat (see figures).

22. In regards to claim 19, Pascasio discloses that the aft-extending recess extends along substantially a full width of said forward partition. Note that the wall as depicted, conforms along its entire width.

23. In regards to claim 20, Pascasio discloses that the lavatory has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory has varying lengths along the height of the lavatory, and said lavatory is longer at the top of the

lavatory than at the bottom of the lavatory. The shape of the wall of Pascasio, when functioning as one wall of a lavatory, as modified with Thompson, teaches the claimed dimensions.

Summary/Conclusion

24. Claims 1-20 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit: 3641

/BENJAMIN P LEE/

Primary Examiner, Art Unit 3641

Notice of References Cited	Application/Control No. 14/043,500	Applicant(s)/Patent Under Reexamination COOK ET AL.	
	Examiner BENJAMIN P. LEE	Art Unit 3641	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2,760,443 A	08-1956	GOBRECHT GEORGE W	105/315
*	B	US-2,914,001 A	11-1959	MURPHY GOODRICH K	105/315
*	C	US-5,716,026 A	02-1998	Pascasio et al.	244/118.6
*	D	US-2007/0164157 A1	07-2007	Park, James	244/118.6
*	E	US-7,284,287 B2	10-2007	Cooper et al.	4/664
*	F	US-7,448,575 B2	11-2008	Cheung et al.	244/118.6
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	2514	244/118.5	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/07 15:27
L6	2172	b64d11/00.cpc. or b64d2011/0046.cpc. or b64d11/0023.cpc. or b64d11/06.cpc. or b64d2011/0617.cpc. or b64d2011/0665.cpc.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/07 15:32
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L9	2469	b64d11/00.cpc. or b64d2011/0046.cpc. or b64d11/0023.cpc. or b64d11/06.cpc. or b64d2011/0617.cpc. or b64d2011/0665.cpc. or b63b11/00.cpc. or b63b11/02.cpc. or b63b29/00.cpc. or b63b29/02.cpc.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/07 15:36
L10	349	(4/663,664).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/07 15:39
L11	79	a47k3/00.cpc. or a47k11/00.cpc.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/07 15:42
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S14	2	("20090050738" "7222820").PN.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/10 15:12

S15	12	("1731531" "1905389" "20020145080" "2817091" "4884767" "5309146" "5474260").PN. OR ("7222820").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 15:13
S16	51	("2743683" "2882835" "4100857" "4645145" "D155335" "D155363").PN. OR ("4884767").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 15:14
S17	48	("1850747" "2188562" "2443214" "2650368" "2681016" "2760443" "2914001" "3898704" "4100857" "4202061" "4589463" "4645145" "4681044" "4868936" "4884767" "5083727" "5150863" "5426900" "5474260" "6604709" "D487137").PN. OR ("2006/0192050" "6079669" "7284287").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 15:20
S18	19	S1 and (bulkhead or wall or partition) with (angled or contour or recessed) with (seat or back)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 15:24
S19	12	S1 and (lavatory or bathroom or head) with (contour\$3 or angled or recessed) with (wall or bulkhead or partition)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 15:29
S20	3928	((244/1r,118.5,118.6,129.1,117r) or (114/116)).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/10 21:06
S21	29	S20 and (wall or bulkhead or divider) with (inclin\$3)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 21:06
S22	44	S20 and (lavatory or bathroom or head or wash) with (inclin\$3 or recessed)	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/10 21:09
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S25	0	("2012/0325964").URPN.	USPAT	OR	OFF	2013/01/10 21:15
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S28	26	S27 and (wall or divider or bulkhead or lavatory or bathroom or wash) with conform\$4	US- PGPUB; USPAT; USOCR	OR	OFF	2013/01/11 09:50
S29	0	(2009/0050738).CCLS.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/11 10:53
S30	1	("20090050738").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/11 10:53
S31	1	("4055317").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/11 10:53
S32	4	("20090050738" "20090255437" "7222820" "20090200422" "20090050738").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/01/11 11:01
S33	157	("0177795" "1789899" "1850747" "20060284013" "20070125909" "20090224103" "20100065683" "20100140400" "2142396" "2188562" "2443214" "2546133" "2582002" "2589894" "2650368" "2681016" "2743683" "2760443" "2882835" "2914001" "3719959" "3898704" "4066227" "4100857" "4202061" "4375876" "4475465" "4589463" "4597549" "4645145" "4681044" "4854245" "4868936" "4884767" "4899962" "5083727" "5150863"	US- PGPUB; USPAT; USOCR	OR	OFF	2013/06/19 11:08

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S34	501	wall with conform with seat	US- PGPUB; USPAT; USOCR	OR	OFF	2013/06/19 11:14
S35	19	wall with conform with seat and aircraft	US- PGPUB; USPAT; USOCR	OR	OFF	2013/06/19 11:14
S36	153	wall with recess with seat and aircraft	US- PGPUB; USPAT; USOCR	OR	OFF	2013/06/19 11:15
S37	2	("2005014395").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/19 11:18
S38	1	("20050014395").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/19 11:18
S39	55	thompson.inv. adj james and aircraft	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/19 11:20
S40	8	("20030218095" "3446530" "5992798" "6059364" "6227489" "7025306" "7252332").PN. OR ("7918504").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/06/19 11:22
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S42	1	("20090050738").PN.	US- PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/19 11:24

S43	1	("4055317").PN.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/25 15:44
S44	41	recess with wall with passenger with seat	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2013/06/25 15:46
S46	50	hawkins.inv. adj aaron	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:37
S47	2	("20090050738" "7222820").PN.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:40
S48	59605	("244").CLAS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:45
S49	376	S48 and wall with recess	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:46
S50	114	S48 and wall with recess and seat	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:46
S51	12	("2914001").URPN.	USPAT	OR	OFF	2014/03/06 11:52
S52	44	("1991536" "2608366" "2808787" "2914001" "2977898" "4686908").PN. OR ("5716026").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/03/06 11:54
S53	22	("20060192050" "20070241232" "20070295863" "20090050738" "20090065642" "20090200422" "20090255437" "20110121134" "20110139930" "20120112505" "20120273614" "20120325964" "4055317" "4884767" "5577358" "6079669" "6889936" "7222820" "7284287" "8109469" "8162258" "8167244").PN.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 11:59
S54	249	(seatback or (seat-back) or (seat adj back)) with (space or recess) with (wall or bulkhead)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 12:01
S55	59605	("244").CLAS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 15:18

S56	540	S55 and recess\$3 with (wall or bulkhead)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 15:18
S57	52	S55 and recess\$3 with (wall or bulkhead) with (seat or chair)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 15:19
S58	0	seat with recline with recess with wall	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 16:19
S59	21	seat with recline with recess	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 16:19
S60	1	seatback with recline with recess	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 16:19
S61	11	S55 and (wall or bulkhead) with contour with (seat or back or seatback or recline)	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2014/03/06 16:20
S62	220	("0177795" "1789899" "1850747" "1991536" "20020033432" "20040195451" "20040232283" "20060284013" "20070125909" "20080042010" "20090224103" "20100065683" "20100140400" "2081529" "2142396" "2188562" "2443214" "2546133" "2582002" "2589894" "2608366" "2650368" "2681016" "2743683" "2760443" "2808787" "2882835" "2914001" "2947349" "2953103" "2977898" "3719959" "3898704" "4066227" "4100857" "4157797" "4202061" "4375876" "4475465" "4589463" "4597549" "4645145" "4681044" "4686908" "4854245" "4868936" "4884767" "4899962" "5083727" "5150863" "5165626" "5393013" "5425516" "5426900" "5474260" "5482230" "5577358" "5605014" "5716026" "5784836" "5992798" "6012679" "6059364" "6073883" "6079669" "6152400" "6173921" "6182926" "6209956" "6237872" "6276635" "6305644" "6305645" "6464169" "6520451" "6581876" "6604709" "6659225" "6669141" "7025306" "7055904" "7083145" "7111904" "7213882" "7419214" "7530529" "7721991" "7905451" "7975962" "D155335" "D155363" "D487137" "D583579")	US-PGPUB; USPAT; USOCR	OR	OFF	2014/03/06 16:24

"D621330" "D621331").PN. OR				
("2006/0192050" "2007/0164157"				
"2007/0241232" "2007/0295863"				
"2009/0050738" "2009/0065642"				
"2011/0121134" "2011/0139930"				
"2012/0112505" "2012/0273614"				
"2012/0325964" "2760443" "2914001"				
"4884767" "5577358" "5716026"				
"6079669" "6889936" "7284287"				
"7448575" "8109469" "8162258"				
"8167244").URPN.				

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Receipt date: 10/01/2013

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14043500 - GAL: 3641

Approved for use through 07/31/2012. OMB 0651-0031

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	Filing Date		
	First Named Inventor	Don Cook	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	BEALCI-91286	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	4055317		1977-10-25	Greiss	
	2	4884767	A	1989-12-00	Shibata	
	3	5577358	A	1996-11-00	Franke	
	4	6079669	A	2000-06-00	Hanay et al.	
	5	6889936	B1	2005-05-00	Pho et al.	
	6	7222820	B2	2007-05-29	Wentland et al.	
	7	7284287	B2	2007-10-00	Cooper et al.	
	8	8109469	B2	2012-02-00	Breuer et al.	

Receipt date: 10/01/2013 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500 - GAU: 3641	
	Filing Date			
	First Named Inventor	Don Cook		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		BEALCI-91286	

	9	8162258	B2	2012-04-00	Joannis et al.	
	10	8167244	B2	2012-05-00	Johnson et al.	

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	2	20070241232	A1	2007-10-00	Thompson	
	3	20070295863	A1	2007-10-00	Thompson	
	4	20090050738	A1	2009-02-26	Breuer	
	5	20090065642	A1	2009-03-00	Cheung et al.	
	6	20090200422	A1	2009-08-13	Johnson	
	7	20090255437	A1	2009-10-15	Hatchet	

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	Filing Date			
	First Named Inventor	Don Cook		
	Art Unit			
	Examiner Name			
	Attorney Docket Number	BEALCI-91286		

	8	20110121134	A1	2011-05-00	Schotte et al.	
	9	20110139930	A1	2011-06-00	Sutthoff et al.	
	10	20120112505	A1	2012-05-00	Breuer et al.	
	11	20120273614	A1	2012-11-00	Ehlers et al.	
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	1	2005014395	WO	A1	2005-02-17	Thompson		<input type="checkbox"/>
	2	2005080196	WO	A1	2005-09-01	Leadern Invest Ltd		<input type="checkbox"/>

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	Filing Date			
	First Named Inventor	Don Cook		
	Art Unit			
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Search Notes 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

CPC- SEARCHED		
Symbol	Date	Examiner
b64d11/00.cpc. or b64d2011/0046.cpc. or b64d11/0023.cpc. or b64d11/06.cpc. or b64d2011/0617.cpc. or b64d2011/0665.cpc. or b63b11/00.cpc. or b63b11/02.cpc. or b63b29/00.cpc. or b63b29/02.cpc.	3/7/2014	LEE
a47k3/00.cpc. or a47k11/00.cpc.	3/7/2014	LEE

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US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
244	1r,118.5,118.6,129.1,117r	3/7/2014	LEE
114	116	3/7/2014	LEE

SEARCH NOTES		
Search Notes	Date	Examiner
Text search	3/7/2014	LEE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

PUBLICATION NOTICE



Title:AIRCRAFT INTERIOR LAVATORY

Publication No.US-2014-0158825-A1

Publication Date:06/12/2014

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The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

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In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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Appl. No. : 14/043,500 Confirmation No. : 1662
Inventor : DON COOK, et al.
Filed : April 18, 2011
Title : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3641
Examiner : Benjamin P. Lee
Docket No. : BEALCI-91286
Customer No. : 24201
Date : September 12, 2014

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in reply to the Office Action dated March 13, 2014, setting a shortened statutory term for a response of three months. Applicant herewith petitions the Director of the United States Patent and Trademark Office to extend the time for reply to the Office Action dated March 13, 2014, for 3 months, from June 13, 2014, to September 13, 2014. The extension fees will be paid by credit card with this Electronic Transmission. Please enter the following amendments.

Amendments to the Specification begin on page 2; amendments to the Claims begin on page 4; amendments to the Drawings begin on page 7; and remarks begin on page 8.

AMENDMENTS TO THE SPECIFICATION:

Please amend paragraph 0019 to read as follows:

[0019] Referring to the drawings, which are provided by way of example, and not by way of limitation, the present invention provides for an enclosure 10, such as a lavatory for a cabin 12 of an aircraft (not shown), although the enclosure may also be an aircraft closet, or an aircraft galley, or similar enclosed or structurally defined spaces, for example. As is illustrated in Fig. 2, the cabin includes a structure 14, and the enclosure may be taller than the cabin structure. The cabin structure can be a passenger seat 16, for example, installed immediately forward of the enclosure and having an aft portion 18 with an exterior aft surface 20 that is substantially not flat in a vertical plane 22. The lavatory includes a lavatory stall unit 24 having one or more walls 26 having a forward wall portion 28. The one or more walls define an interior lavatory space 30, and the forward wall portion is configured to be disposed immediately aft of and adjacent to or abutting the exterior aft surface of the aircraft cabin structure. The forward wall portion has a shape that is substantially not flat in the vertical plane, and preferably is shaped to include a recess 34 such that the forward wall portion substantially conforms to the shape of the exterior aft surface of the aircraft cabin structure. In a presently preferred aspect, the forward wall portion of the lavatory stall unit is configured to accept loads from the passenger seat. As shown in Fig. 2, the forward wall portion 28 can be configured to provide a lower recess 100 formed between the forward wall portion 28 and the cabin deck 102. As also shown in Fig. 2, the lower recess 100 can be configured to receive at least a portion of an aft-extending seat support 17 therein. As can be seen by comparing Fig. 1 and Fig. 2, the recess 34 and the lower recess 100 combine to permit the passenger seat 16 to be positioned farther aft in the cabin than would be possible if the lavatory enclosure 10 included a conventional flat and vertical forward wall

without recesses like that shown in Fig. 1, or included a forward wall that did not include both recesses 34, 100.

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended) An aircraft ~~enclosure~~ lavatory for a cabin of an aircraft of a type that includes a forward-facing passenger seat that includes an upwardly and aftwardly inclined seat back and an aft-extending seat support disposed below the seat back, the lavatory comprising:

a lavatory an enclosure unit including at least one wall a forward wall portion and defining an enclosed interior enclosure lavatory space, said at least one wall including a forward wall portion configured to be disposed immediately adjacent to a proximate to and aft of the passenger seat [[back]] and including an exterior surface having a shape that is substantially not flat in a vertical plane; and

wherein said forward wall portion is shaped to substantially conform to the shape of the exterior surface upwardly and aftwardly inclined seat back of the passenger seat [[back]], and said wall portion includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back exterior surface of the passenger seat [[back]] therein, and further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess.

Claim 2 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1, wherein said forward wall portion is configured to accept loads from the passenger seat back.

Claim 3 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1, wherein said forward wall portion further includes a projection configured to project over the passenger seat back when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess and at least a portion of the aft-extending seat support is received within the second recess.

Claim 4 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1, wherein said ~~enclosure~~ lavatory unit is taller than the passenger seat.

Claim 5 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1, wherein said forward wall portion includes a lower portion that ~~extends~~ is disposed under the passenger seat back when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess and at least a portion of the aft-extending seat support is received within the second recess.

Claim 6 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1, wherein said first recess in said forward wall portion is disposed between an upper wall portion and a lower wall portion.

Claim 7 (Cancelled)

Claim 8 (Currently amended) The aircraft ~~enclosure~~ lavatory of Claim 1 ~~Claim 7~~, wherein said forward wall portion defines a secondary space in said interior lavatory space above the passenger seat back.

Claims 9-10 (Cancelled)

Claim 11 (Currently amended) An aircraft lavatory for an aircraft, the lavatory comprising:

a forward partition;

an aft partition; and

a lavatory space disposed between the forward partition and the aft partition;

wherein the forward partition comprises:

a forward-extending upper portion;

an aft-extending mid-portion; and

a forward-extending lower portion; and

wherein the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion combine to define ~~[[an]]~~ a first aft-extending recess disposed between the upper forward-extending portion and the forward-extending lower portion, and

wherein the forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein.

Claim 12 (Currently amended) The aircraft lavatory according to Claim 11 wherein the first aft extending recess defined by the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition is configured to

receive an aft-extending ~~portion seat back~~ of ~~[[a]]~~ the forward-positioned passenger seat ~~that is disposed immediately forward of the lavatory.~~

Claim 13 (Original) The aircraft lavatory according to Claim 11 wherein the aft partition is substantially vertical and substantially planar.

Claim 14 (Original) The aircraft lavatory according to Claim 11 wherein the width of the lavatory space disposed between the forward partition and the aft partition comprises an upper width, a lower width, and a mid-width, and wherein the upper width and the lower width are both substantially wider than the mid-width.

Claim 15 (Original) The aircraft lavatory according to Claim 11 wherein the upper forward-extending portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition form a substantially continuous surface.

Claim 16 (Currently amended) The aircraft lavatory according to Claim 12 wherein said forward-extending upper portion is configured to project over at least a portion of the forward-positioned passenger seat.

Claim 17 (Currently amended) The aircraft lavatory according to Claim 12 wherein said forward partition is configured to accept loads from the forward-positioned passenger seat.

Claim 18 (Currently amended) The aircraft lavatory according to Claim 12 wherein said lavatory is taller than the forward-positioned passenger seat.

Claim 19 (Currently amended) The aircraft lavatory according to claim 11 wherein said first aft-extending recess extends along substantially a full width of said forward partition.

Claim 20 (Original) The aircraft lavatory according to claim 11 wherein said lavatory has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory has varying lengths along the height of the lavatory, and said lavatory is longer at the top of the lavatory than at the bottom of the lavatory.

AMENDMENTS TO THE DRAWINGS:

Please substitute the enclosed sheet 1/1 of the formal drawings, including Fig. 1 and Fig. 2, identified in the upper right corner as "Replacement Sheet," for sheet 1/1 of the formal drawings currently on file. Fig. 2 has been amended to include reference numbers 17, 100 and 102, identifying the features of the aft-extending seat support 17, the lower recess 100, and the cabin deck 102 clearly shown in Fig. 2 as originally filed.

REMARKS

By the foregoing Amendment, paragraph 0019 of the specification has been amended, Claims 1-6, 8, 11-12, and 16-19 have been amended, Claims 7, 9 and 10 have been cancelled without prejudice or disclaimer, and Fig. 2 of the drawings has been amended. It is respectfully submitted that the amendment introduces no new matter. Claims 1-6, 8 and 11-20 are pending. Favorable reconsideration of the application is respectfully requested.

Paragraph 0019 of the specification has been amended to include reference numbers 17, 100 and 102, and Fig. 2 has been amended to include the reference numbers 17, 100 and 102, identifying the features of the aft-extending seat support 17, the lower recess 100, and the cabin deck 102 clearly shown in Fig. 2 as originally filed. It is respectfully submitted that the amendments do not include any impermissible new matter, because the described features are clearly shown in the original drawings, and that a person of ordinary skill in the art would understand that the changes to the specification, drawings and claims are implicit in the original disclosure.

Claims 1-6 were rejected under 35 U.S.C. §102(b) on the grounds of anticipation by Pascasio, et al. (US 5,716,026). The Examiner indicated that Pascasio, et al. discloses an aircraft enclosure for a cabin of an aircraft comprising an enclosure unit including at least one wall defining an interior enclosure space, referring to wall units 40 of Fig. 2 of Pascasio, et al. The Examiner acknowledged that Pascasio, et al. does not disclose that the enclosure unit comprises a lavatory unit.

In order to clarify the invention claimed, Claim 1 has been amended to recite an aircraft "lavatory for a cabin of an aircraft of a type that includes a passenger seat that includes an upwardly and aftwardly inclined seat back and an aft-extending seat support disposed below the

seat back," "a lavatory unit including a forward wall portion and defining an enclosed interior lavatory space, said forward wall portion configured to be disposed proximate to and aft of the passenger seat and including an exterior surface having a shape that is substantially not flat in a vertical plane," and "wherein said forward wall portion is shaped to substantially conform to the shape of the upwardly and aftwardly inclined seat back of the passenger seat, and includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein, and further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess." Support for the amendments can be found in paragraphs 0019 and 0020 of the specification, and Fig. 2, for example.

It is respectfully submitted that there is no evidence or suggestion in Pascasio, et al. of an aircraft lavatory for a cabin of an aircraft of a type that includes a passenger seat that includes an upwardly and aftwardly inclined seat back and an aft-extending seat support disposed below the seat back, a lavatory unit including a forward wall portion and defining an enclosed interior lavatory space, the forward wall portion configured to be disposed proximate to and aft of the passenger seat and including an exterior surface having a shape that is substantially not flat in a vertical plane, and wherein the forward wall portion is shaped to substantially conform to the shape of the upwardly and aftwardly inclined seat back of the passenger seat, and includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein, and further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess, as is

claimed. It is therefore respectfully submitted that Claims 1-6 patentably distinguish Pascasio, et al., and that the rejections of Claims 1-6 on the grounds of anticipation by Pascasio, et al. should be withdrawn.

Claims 7-20 were rejected under 35 U.S.C. §103(a) on the grounds of obviousness from Pascasio, et al. in view of Thompson et al. (US 2007/0241232), of which Fig. 12 was cited as disclosing an interior lavatory space that incorporates a recess in a wall to allow a portion of a seat to extend into it. Claims 7, 9 and 10 have been cancelled without prejudice or disclaimer.

At column 5, lines 35-37, Pascasio, et al. explains that in gaining access to the seats, all from the same floor surface, only half of the passengers need climb one hop up, with no need to contort or to grovel. Further, at column 5, lines 45-46, Pascasio, et al. explains that seats are arrayed in the manner of conventional seating longitudinally along designated space facing one direction with cross-aisles for egress and ingress, so that it should be understood that there would need to be a longitudinal main aisle along the floor surface to allow egress and ingress with the cross-aisles, and that therefore the main frame 40 would not be a wall defining an enclosure space, because clearly the cross-aisles would need to not be enclosed in order to connect with the longitudinal main aisle to allow passengers to gain access to the seats all from the same floor surface.

Further, at paragraph 0061, Thompson et al. explains that at the rear of a group of seats, the seat merely can be mounted close to a bulkhead, which corresponds to Fig. 1 of the present application, depicting the prior art.

Claim 8 depends from Claim 1, discussed above. It is respectfully submitted that there is no evidence or suggestion in the combination of Pascasio, et al. and Thompson et al. of an aircraft lavatory for a cabin of an aircraft of a type that includes a passenger seat that includes an

upwardly and aftwardly inclined seat back and an aft-extending seat support disposed below the seat back, a lavatory unit including a forward wall portion and defining an enclosed interior lavatory space, the forward wall portion configured to be disposed proximate to and aft of the passenger seat and including an exterior surface having a shape that is substantially not flat in a vertical plane, and wherein the forward wall portion is shaped to substantially conform to the shape of the upwardly and aftwardly inclined seat back of the passenger seat, and includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein, and further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess, as is claimed.

Claim 11 also has been amended to recite "wherein the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion combine to define a first aft-extending recess disposed between the upper forward-extending portion and the forward-extending lower portion," and "wherein the forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein." Support for the amendments can be found in paragraph 0019 of the specification, and Fig. 2, for example.

Regarding Claims 11-20, it is respectfully submitted that there is no evidence or suggestion in the combination of Pascasio, et al. and Thompson et al. of an aircraft lavatory, including a forward-extending upper portion, an aft-extending mid-portion, and a forward-extending lower portion that combine to define a first aft-extending recess disposed between the

upper forward-extending portion and the forward-extending lower portion, and wherein a forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein, as is claimed. It is therefore respectfully submitted that Claims 8 and 11-20 patentably distinguish the combination of Pascasio, et al. and Thompson et al., and that the rejections of Claims 7-20 on the grounds of obviousness from Pascasio, et al., in view of Thompson et al., should be withdrawn.

In light of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance, and an early favorable action in this regard is respectfully requested.

The Commissioner is authorized to charge any deficiencies or fees in connection with this amendment to Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /James W. Paul/
James W. Paul
Reg. No. 29,967

JWP:lm
Encl.: Replacement Sheet 1/1 of drawings

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696
Customer No. 24201

FIG. 1
(Prior Art)

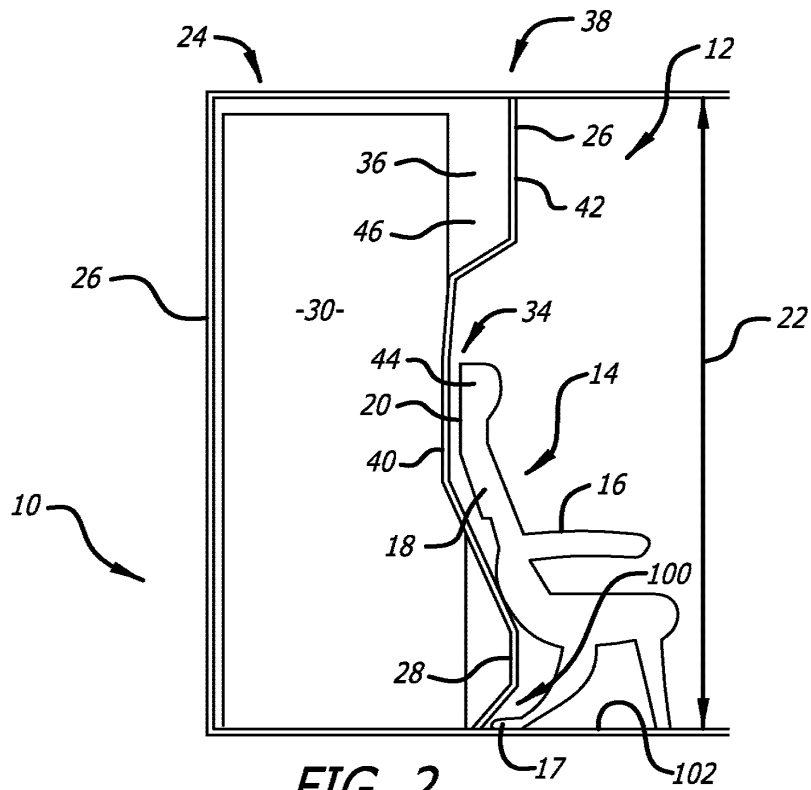
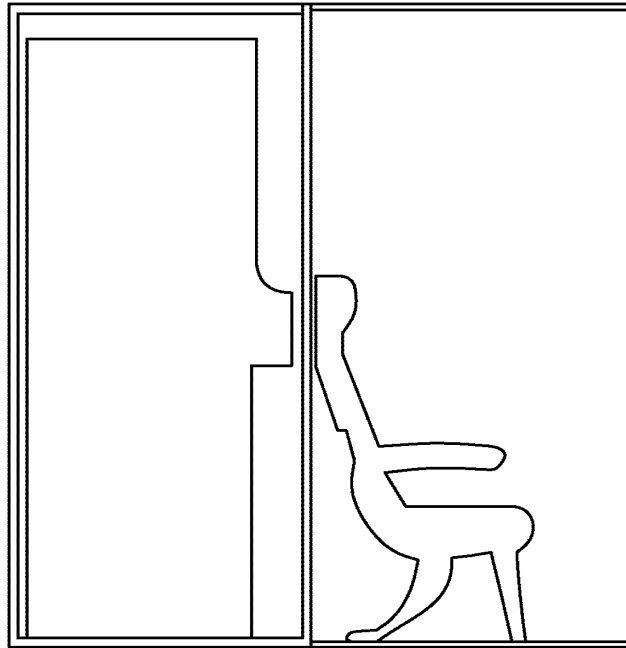


FIG. 2

Electronic Patent Application Fee Transmittal				
Application Number:	14043500			
Filing Date:	01-Oct-2013			
Title of Invention:	AIRCRAFT INTERIOR LAVATORY			
First Named Inventor/Applicant Name:	Don F. Cook			
Filer:	James Warren Paul			
Attorney Docket Number:	BEALCI-91286			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with \$0 paid	1253	1	1400	1400

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				1400

Electronic Acknowledgement Receipt	
EFS ID:	20128334
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul
Filer Authorized By:	
Attorney Docket Number:	BEALCI-91286
Receipt Date:	12-SEP-2014
Filing Date:	01-OCT-2013
Time Stamp:	17:02:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1400
RAM confirmation Number	3611
Deposit Account	062425
Authorized User	PAUL, JAMES W
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		AMENDMENT.pdf	50602	yes	12
			9b93e344de035fd3b463c98c7912f12e3f336f9b		
	Multipart Description/PDF files in .zip description				
	Document Description		Start		End
	Amendment/Req. Reconsideration-After Non-Final Reject		1		1
	Specification		2		3
	Claims		4		6
	Drawings-only black and white line drawings		7		7
	Applicant Arguments/Remarks Made in an Amendment		8		12
Warnings:					
Information:					
2	Drawings-only black and white line drawings	Replacement_Sheet.pdf	28142	no	1
			a1c766c7f2d0e318c8bd5a4b5cb5174f4dacfadc		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30400	no	2
			db1825fb15d0535c3841061162895f464105f8cc		
Warnings:					
Information:					
Total Files Size (in bytes):			109144		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 14/043,500		Filing Date 10/01/2013		<input type="checkbox"/> To be Mailed				
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO													
APPLICATION AS FILED – PART I													
(Column 1)			(Column 2)										
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)					
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A							
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A							
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A							
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =							
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =							
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))													
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL							
APPLICATION AS AMENDED – PART II													
(Column 1)			(Column 2)			(Column 3)							
AMENDMENT	09/12/2014		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		* 17		Minus	** 20		= 0		X \$80 =		0	
	Independent (37 CFR 1.16(h))		* 2		Minus	*** 3		= 0		X \$420 =		0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))												
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))												
	TOTAL ADD'L FEE											0	
(Column 1)			(Column 2)			(Column 3)							
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		*		Minus	**		=		X \$ =			
	Independent (37 CFR 1.16(h))		*		Minus	***		=		X \$ =			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))												
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))												
	TOTAL ADD'L FEE												
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>													

LIE
/LYNNELL JOHNSON/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

24201 7590 10/09/2014
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

EXAMINER

LEE, BENJAMIN P

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 10/09/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

TITLE OF INVENTION: AIRCRAFT INTERIOR LAVATORY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	01/09/2015

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24201 7590 10/09/2014
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

TITLE OF INVENTION: AIRCRAFT INTERIOR LAVATORY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	01/09/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, BENJAMIN P	3641	244-118600

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662
24201 7590 10/09/2014 FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045			EXAMINER LEE, BENJAMIN P	
			ART UNIT 3641	PAPER NUMBER

DATE MAILED: 10/09/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<i>Notice Requiring Inventor's Oath or Declaration</i>	Application No. 14/043,500	Applicant(s) Don F. Cook	
	Examiner LEE, BENJAMIN P	Art Unit 3641	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) **MUST** be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

- A properly executed inventor's oath or declaration has not been received for the following inventor(s): **Don F. Cook, Liberty Harrington, Philipp Steiner, Robert K. Brauer, and Trevor Skelly.**

Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/043,500	Applicant(s) COOK ET AL.	
	Examiner BENJAMIN P. LEE	Art Unit 3641	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/12/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-6, 8 and 11-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. <input type="checkbox"/> Notice of References Cited (PTO-892)	5. <input type="checkbox"/> Examiner's Amendment/Comment
2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance
3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. <input type="checkbox"/> Other _____
4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____	

/BENJAMIN P LEE/ Primary Examiner, Art Unit 3641	
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The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Drawings

1. The drawings were received on 9/12/2014. These drawings are acceptable.

Specification

2. Applicant's amendments to the specification are acceptable, since they describe what was originally presented in the figures.

Allowable Subject Matter

3. Claims 1-6, 8 and 11-20 are allowed.
4. The following is an examiner's statement of reasons for allowance: The closest prior art fails to teach or make obvious, including all the limitations of claims 1, a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received in the first recess. The closest prior art fails to teach or make obvious, including all the limitations of claims 11, that the forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition,

the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Collins can be reached on 571-272-6886. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 14/043,500
Art Unit: 3641

Page 4

/BENJAMIN P LEE/

Primary Examiner, Art Unit 3641

Search Notes 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

CPC- SEARCHED		
Symbol	Date	Examiner
b64d11/00.cpc. or b64d2011/0046.cpc. or b64d11/0023.cpc. or b64d11/06.cpc. or b64d2011/0617.cpc. or b64d2011/0665.cpc. or b63b11/00.cpc. or b63b11/02.cpc. or b63b29/00.cpc. or b63b29/02.cpc.	3/7/2014	LEE
a47k3/00.cpc. or a47k11/00.cpc.	3/7/2014	LEE


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
244	1r,118.5,118.6,129.1,117r	3/7/2014	LEE
114	116	3/7/2014	LEE

SEARCH NOTES		
Search Notes	Date	Examiner
Text search	3/7/2014	LEE
Inventor search	3/7/2014	LEE

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
244	1r,118.5,118.6,129.1,117r	9/25/2014	LEE
114	116	9/25/2014	LEE


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Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.	
	Examiner BENJAMIN P LEE	Art Unit 3641	

CPC					
Symbol				Type	Version
B64D	11	02		F	2013-01-01
B64C	1	10		I	2013-01-01
Y02T	50	46		A	2013-01-01


CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	17	
/BENJAMIN P LEE/ Primary Examiner.Art Unit 3641	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION														
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED									
244		118.6				B	6	4	D	11 / 06 (2006.01.01)										
CROSS REFERENCE(S)																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			
114	116																			
244	118.5																			

NONE		Total Claims Allowed:	
		17	
(Assistant Examiner)	(Date)		
/BENJAMIN P LEE/	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
Primary Examiner.Art Unit 3641		1	2
(Primary Examiner)	(Date)		

Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	11	17												
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3	3	16	19												
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15	15														
10	16														

NONE		Total Claims Allowed:	
		17	
(Assistant Examiner)	(Date)		
/BENJAMIN P LEE/ Primary Examiner.Art Unit 3641	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2



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BIB DATA SHEET

CONFIRMATION NO. 1662

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/043,500	10/01/2013	244	3641	BEALCI-91286

APPLICANTS
 B/E AEROSPACE, INC., WELLINGTON, FL, Assignee (with 37 CFR 1.172 Interest);

INVENTORS
 Don F. Cook, Arlington, WA;
 Liberty Harrington, Seattle, WA;
 Philipp Steiner, Seattle, WA;
 Robert K. Brauer, Seattle, WA;
 Trevor Skelly, Mercer Island, WA;

**** CONTINUING DATA *******
 This application is a CON of 13/089,063 04/18/2011 PAT 8590838
 which claims benefit of 61/346,835 05/20/2010
 and claims benefit of 61/326,198 04/20/2010

**** FOREIGN APPLICATIONS *******

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
 10/17/2013

Foreign Priority claimed 35 USC 119(a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No /BENJAMIN P LEE/ Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	STATE OR COUNTRY WA	SHEETS DRAWINGS 1	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 2
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ADDRESS
 FULWIDER PATTON LLP
 HOWARD HUGHES CENTER
 6060 CENTER DRIVE, TENTH FLOOR
 LOS ANGELES, CA 90045
 UNITED STATES

TITLE
 AIRCRAFT INTERIOR LAVATORY

FILING FEE RECEIVED 1740	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees
		<input type="checkbox"/> 1.16 Fees (Filing)
		<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
		<input type="checkbox"/> 1.18 Fees (Issue)
		<input type="checkbox"/> Other _____
		<input type="checkbox"/> Credit

EAST Search History**EAST Search History (Interference)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	948	((244/1r,118.5,118.6,129.1,117r) or (114/116)).CCLS.	US-PGPUB; UPAD	OR	OFF	2014/09/25 12:50

9/ 25/ 2014 12:50:46 PM**C:\ Users\ blee19\ Documents\ EAST\ Workspaces\ 13089063.wsp**

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	14/043,500	Filing Date	2013-10-01	Docket Number (if applicable)	BEALCI-91286	Art Unit	3641
First Named Inventor	Don F. Cook			Examiner Name	BENJAMIN P. LEE		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☐ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____.
 (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
 Deposit Account No 062425

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Signature of Registered U.S. Patent Practitioner			
Signature	/JAMES W. PAUL/	Date (YYYY-MM-DD)	2014-12-22
Name	James W. Paul	Registration Number	29967

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500
	Filing Date		2013-10-01
	First Named Inventor	Don F. Cook	
	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	2650368	A	1953-09-01	EVANS RANDOLPH	
	2	3738497	A	1973-06-12	BETTS E et al.	
	3	5150863	A	1992-09-29	HOZUMI; HIROYUKI et al.	
	4	5333416	A	1994-08-02	HARRIS; EDWARD D. - ; SCHIMMELPFENNIG et al.	
	5	5340059	A	1994-08-23	Kanigowski	
	6	5482230	A	1996-01-09	BIRD MICHAEL S et al.	
	7	5529265	A	1996-06-25	SAKURAI BUNKICHI	
	8	6615421	B2	2003-09-09	Itakura	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	
	Filing Date		2013-10-01	
	First Named Inventor	Don F. Cook		
	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

	9	7934679	B2	2011-05-03	Bock et al.	
	10	8096502	B2	2012-01-17	Bock et al.	
	11	8177163	B2	2012-05-15	Wilczynski et al.	

If you wish to add additional U.S. Patent citation information please click the Add button.

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U.S.PATENT APPLICATION PUBLICATIONS

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20070170310	A1	2007-07-26	Bock et al.	
	2	20110210205	A1	2011-09-01	BOCK et al.	
	3	20130206906	A1	2013-08-15	Burrows et al.	
	4	20140014774	A1	2014-01-16	Pozzi et al.	
	5	20140027572	A1	2014-01-30	Ehlers et al.	

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FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	
	Filing Date		2013-10-01	
	First Named Inventor	Don F. Cook		
	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	1281614	EP	A1	2005-03-30	Farnsworth		<input type="checkbox"/>
	2	03026495	WO	A2	2003-04-03	KEOGH		<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	MCDONNELL DOUGLAS, DC-10 Customer Configuration, October 1978, 177 pages	<input type="checkbox"/>
	2	C&D Zodiac, Inc.'s proposal to Scandinavian Airlines System to manufacture S4 Storage Unit, August 23, 2001, 17 pages	<input type="checkbox"/>
	3	C&D Zodiac, Inc.'s drawings with a leading page entitled "MD90," 27 pages	<input type="checkbox"/>
	4	Photographs of C&D Zodiac, Inc.'s S4 storage unit, 5 pages	<input type="checkbox"/>
	5	C&D Zodiac, Inc.'s Petition for Inter Partes Review of U.S. Patent No. 8,590,838 (including exhibits/tabs 1-9), May 2, 2014, 856 pages	<input type="checkbox"/>
	6	Technical Proposal by FSI to Air France regarding a Door 4 overhead crew rest station for the Boeing 747, August 3, 1994, 10 pages	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500
	Filing Date		2013-10-01
	First Named Inventor	Don F. Cook	
	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

	7	Rendering and photographs of Boeing 747 overhead crew rest station, 3 pages	<input type="checkbox"/>
	8	B/E Aerospace, Inc. Motion for Preliminary Injunction, May 16, 2014, 25 pages	<input type="checkbox"/>
	9	Greg Chamitoff Declaration in support of B/E Aerospace, Inc.'s Motion for Preliminary Injunction, May 14, 2014, 39 pages	<input type="checkbox"/>

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14043500
	Filing Date	2013-10-01
	First Named Inventor	Don F. Cook
	Art Unit	3641
	Examiner Name	LEE, BENJAMIN P
	Attorney Docket Number	BEALCI-91286

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JAMES W. PAUL/	Date (YYYY-MM-DD)	2014-12-22
Name/Print	James W. Paul	Registration Number	29,967

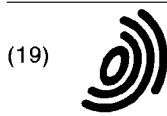
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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(11) **EP 1 281 614 A1**

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
05.02.2003 Bulletin 2003/06

(51) Int Cl.7: **B64D 11/00, A47B 88/00**

(21) Application number: **02077954.2**

(22) Date of filing: **18.07.2002**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Farnsworth, Jeffrey D.**
Marysville, Washington 98270 (US)

(74) Representative: **Land, Addick Adrianus Gosling
Arnold & Siedsma,
Advocaten en Octrooigemachtigden,
Sweelinckplein 1
2517 GK Den Haag (NL)**

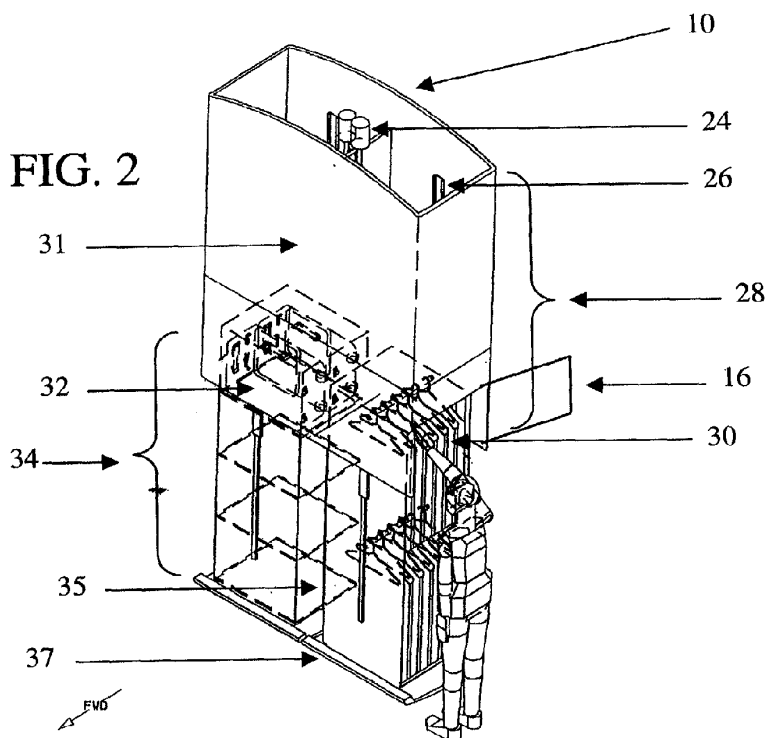
(30) Priority: **02.08.2001 US 921212**

(71) Applicant: **THE BOEING COMPANY**
Seattle, Washington 98124-2207 (US)

(54) Retractable closet

(57) A moveable closet (10) for storing articles in an aircraft includes a fixed outer housing (31) and a moveable inner housing (34) capable of being displaced from a loading position for articles to be placed within a storage compartment to a stowed position, which allows for

additional cabin space during taxiing and flight. The storage compartment defined by the inner housing (34) may be further sub-divided by shelves (32) for storing articles of various sizes and may also be fitted with bars (30) in order to accommodate hanging items.



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Description

FIELD OF THE INVENTION

[0001] The present invention relates to closets, such as the closets onboard an aircraft or the like and, more particularly, a moveable closet for increasing available cabin space.

BACKGROUND OF THE INVENTION

[0002] Airlines are continually looking for new ways to better utilize the cabin space inside their aircraft, balancing the desire to carry as many passengers as possible in as comfortable a manner as possible with the need for adequate storage space. By minimizing the amount of space that is required to store carry-on luggage and other items, the cabin space available for passengers is maximized. As such, extra rows of seats may be added and/or additional seat recline or additional leg room may be provided.

[0003] Each passenger is allowed carry-on luggage, which may be stowed under the seats or in the overhead compartments. Some luggage is too bulky to fit in these areas or, as is the case with an overcoat or jacket, may not be the type of article that a passenger would feel comfortable stuffing into an overhead bin or under the seat in front of them. One solution to this problem is the addition of a relatively large closet typically located in the vicinity of the galley and/or lavatories in the aircraft cabin. These closets are generally large enough to stow coats, hanging bags, larger carry-on luggage. Unfortunately, while these closets do solve problems with storage, they also occupy space on the aircraft that may otherwise be taken by additional seats or allowances for leg room. This problem is further complicated by the necessity of an aisle or walkway that allows flight attendants to access the closet.

[0004] A storage system that offers one solution to this conflict between the need for storage and the desire for more seating space is found on some MD-11™ and DC-10™ aircraft. While the storage system onboard these models of aircraft solved some of the storage difficulties that airlines were having, the storage system did not completely resolve all of these problems, and in fact raised some new issues. The storage system consisted primarily of a bar, which was lowered prior to and following a flight to allow a flight attendant to remove and add hanging items. Once the bar was loaded, it could be raised into a space located at least partially above the cabin during flight. The storage system also included doors that could be closed to prevent access to the hanging items once the bar was raised. The storage system of the MD-11™ and DC-10™ aircraft was located proximate a cross aisle that extended between two lengthwise extending aisles. The bar also extended laterally or crosswise such that, hanging items could, as a practical matter, only be hung on or removed from the

bar while standing in the cross aisle.

[0005] While the MD-11™ and DC-10™ storage system did allow for the storage of items like clothing, the storage system still took up additional room on the aircraft. In this regard, the raising bar was capable of moving a number of items up and out of the way during flight, but the storage system still had a relatively large footprint on the aircraft and required a cross aisle, which was needed to load the bar. Further, there could be problems with the storage of the clothing itself. When the clothes were pulled up into the storage space they were pushed tightly together, which led to the wadding and wrinkling of the items. In some instances, where the bar was heavily loaded, it was necessary for a flight attendant to push items into the storage space in order to permit the bar to be fully raised. While this closet did begin to address the difficulties raised by the need for proper storage and the importance of cabin space, it did not fully solve the problem. For these reasons it could be desirable to provide proper storage of items while maximizing the cabin space available for seating during transit.

SUMMARY OF THE INVENTION

[0006] An interior assembly, such as for an aircraft, is therefore provided that includes a moveable closet which allows for storage of articles while maximizing cabin space. As a result of the design of the moveable closet, the closet protects items placed into its storage compartment so as to avoid wadding of the items as the closet is moved to a stowed position during flight. In addition, the moveable closet can be loaded from the lengthwise extending aisle of an aircraft and, as such, need not be placed adjacent a cross aisle.

[0007] According to the present invention, a moveable closet is therefore provided that includes an outer housing which is typically fixed in position and an inner housing. The inner housing defines an opening for accessing a storage compartment, and is capable of being moved between a loading position and a stowed position. When the inner housing is in the loading position, such as prior to and following the flight, articles are inserted through the opening and into the storage compartment. Advantageously, the opening defined by the inner housing faces a lengthwise extending aisle such that articles may be inserted into the storage compartment while standing in the lengthwise extending aisle.

[0008] The outer housing generally includes at least one door for closing an uppermost portion of the opening, and each door is capable of being opened to access the top portion of the storage compartment when the inner housing is in the loading position. The inner housing may also include shelves for dividing the storage compartment and/or bars for hanging articles.

[0009] The moveable closet preferably also includes an actuation mechanism for moving the inner housing between the loading and stowed positions. This actua-

tion mechanism may include a motor capable of moving the inner housing between the loading and stowed positions. The moveable closet may also include at least one track for guiding the inner housing between the loading and stowed positions. As such, in the loading position, the inner housing is generally readily accessible to facilitate loading and unloading of articles, such as prior to and following flight. In order to provide additional cabin space during flight, however, the inner housing may be stowed. When the inner housing is in the stowed position, the inner housing is at least partially disposed within the outer housing.

[0010] In one preferred embodiment, the moveable closet is a portion of an interior assembly on an aircraft. In addition to the moveable closet, the interior assembly will include a structure fixed in position within the aircraft cabin. The structure includes at least one wall defining a region of the aircraft, and be, for example, a lavatory, galley or fixed closet. The moveable closet will be disposed immediately adjacent to the fixed structure, such that the structure blocks access to a portion of the moveable closet.

[0011] The interior assembly of one preferred embodiment will include a moveable closet that is capable of being vertically displaced between the loading and stowed positions, such as by being adapted to be raised upwardly from the loading to the stowed position. This interior assembly may also include a seat proximate to the moveable closet. This seat is preferably capable of being reclined partially under the moveable closet once the moveable closet was in the stowed position.

[0012] Accordingly, the moveable closet of the present invention allows a flight attendant to load items into the moveable closet while the aircraft is on the ground, and then move the closet into its stowed position, creating additional cabin space on the aircraft. Additionally, cabin space is maximized by accessing the closet from the lengthwise extending aisle rather than requiring a space-consuming cross aisle. The additional cabin-space on the aircraft provided by the moveable closet, may be used for additional seats and/or seat recline or leg room. However, the design of the moveable closet protects articles placed therein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Having thus described the invention in general terms, reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

FIG. 1 is a schematic plan view of the cabin of an aircraft according to an embodiment of the present invention which includes a moveable closet disposed immediately adjacent to a fixed structure, such as a galley or a lavatory;

FIG. 1a is a perspective view of the moveable closet of FIG. 1 in the stowed position in which the move-

able closet is only partially within the interior of the cabin with the remainder of the moveable closet being in the space above the aircraft ceiling;

FIG. 2 is a perspective view of a moveable closet in the loading position according to an embodiment of the present invention; and

FIG. 3 is a schematic side view of a moveable closet disposed between a fixed structure and an airline seat according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0014] Various embodiments of the invention are set forth below. While the invention is described with reference to specific embodiments, such as its use in conjunction with aircraft, it will be understood that the invention is not intended to be so limited. To the contrary, the invention includes numerous alternatives, modifications and equivalents as will become apparent from consideration of the present specification including the drawings. Specifically, it should be apparent that this closet could be used in numerous situations where floor space is critical such as a cruise ship, train or movie theater.

[0015] Referring now to FIG. 1, the cabin 14 of an aircraft 18 is illustrated. The cabin 14 includes several fixed structures 22 such as galleys, lavatories, fixed closets or the like. The cabin 14 also includes at least one lengthwise extending aisle 20 running the length of the cabin and, in the illustrated embodiment, generally includes a pair of lengthwise extending aisles on opposite sides of the fixed structures 22. As will be apparent, the cabin also includes a plurality of passenger seats, which seats have been omitted from the illustrations for purposes of clarity.

[0016] According to the present invention, the cabin 14 also includes a moveable closet 10. The moveable closet 10 may be disposed immediately adjacent a fixed structure 22 in the aircraft cabin 14, and in one instance the moveable closet 10 is placed between two immediately adjacent fixed structures 22. For example, the moveable closet 10 may be adjacent to a lavatory or galley on an aircraft or a state room on a cruise ship or train. As described below, the moveable closet 10 is particularly well adapted to being adjacent a fixed structure 22 since the moveable closet 10 is accessible from one lengthwise extending aisle 20 such that access is not required from either the front or rear of the closet.

[0017] As shown in more detail in the perspective view in FIG. 1a, the moveable closet 10 is capable of being at least partially displaced out of the cabin 14 and into the crown 12 of the aircraft, i.e., the space above the cabin ceiling, while the aircraft is in flight to provide additional cabin space. As further illustrated in FIG. 2 and 3, the moveable closet 10 consists of an inner housing 34 and an outer housing 28. The inner housing 34 is capable of being moved from a loading position as depicted in FIG. 2 to the stowed position of FIG. 1a. The

moveable closet **10** will generally be in the loading position while passengers are embarking and disembarking for the purpose of receiving articles for storage during flight, or for permitting articles to be removed as passengers exit the plane. In contrast, the moveable closet **10** is generally in the stowed position when the plane is taxiing on the runway and in flight, in order to provide additional cabin space.

[0018] The inner housing **34** generally has a floor panel **37** that defines the bottom of the closet, and side walls **35** that extend upwardly from the floor panel to define the storage compartment. The storage compartment is preferably open on at least one and, more preferably, both ends to permit insertion and removal of articles by a person standing in a lengthwise extending aisle **20**. The inner housing **34** may be used as one large storage compartment, ideal for stowing large pieces of luggage, compressed garbage blocks or the like. As can be seen from the illustrated embodiment, the inner housing **34** may also contain shelves **32** for sub-dividing the storage compartment. These shelves **32** can be used to further divide the inner housing **34** and allow for the storage of a number of smaller articles. Additionally or alternatively, the inner housing **34** may contain bars **30** for hanging articles, such as garment bags, coats or any other type of hanging luggage. Hanging items and pieces of luggage would generally be placed in the storage compartment defined by the inner housing **34** as passengers brought these items onto the plane. The inner housing would then preferably be displaced into the outer housing **28**, to allow additional cabin space during the flight. When the plane reaches its destination, the inner housing would be lowered, and passengers could retrieve their items as they disembark.

[0019] Once the inner housing **34** has been loaded, it is moved to the stowed position, preferably fitting snugly into the outer housing **28**. As shown in FIG. **1a**, the outer housing **28** is at least partially disposed within the crown of the aircraft so as to be removed from the cabin area. While the outer housing **28** may be completely disposed within the crown, the lowermost portion of the outer housing **28** of the illustrated embodiment is positioned within the cabin, albeit proximate the ceiling. The portion, if any, of the outer housing **28** that is positioned within the cabin is typically determined by the space available in the crown of the aircraft and the length of the inner housing **34**. In this regard, in instances in which the length of the inner housing **34** is greater than the space available for the outer housing in the crown, lower portions of the outer housing **28** will extend into the cabin **14** in order to permit the inner housing **28** to be completely withdrawn into the outer housing **28**.

[0020] The outer housing **28** of the moveable closet **10** may be secured in position, such as within the crown of an aircraft, in various manners, only a few of which will be described hereinbelow for purposes of example. As illustrated in FIG. **1a**, the outer housing **28** of the moveable closet **10** may be attached to and therefore

supported by lengthwise extending frame members **15**, as well as crosswise frame members **13** extending between the lengthwise extending frame members **15**. Alternatively, a support structure could extend directly down from upper portions of the crown **12** of the aircraft for securing the moveable closet therein. Still further, the moveable closet **10** may be directly attached to upper portions of the crown so as to extend downwardly therefrom.

[0021] The outer housing **28**, of the illustrated embodiment has side walls **31** on four sides to truly define a volume that is preferably sized to snugly receive the inner housing **34**. As shown, these side walls **31** serve to cover the openings to the storage compartment of the inner housing **34**, thereby protecting the articles stored within the storage compartment within crumpling or wadding the articles as in some conventional designs. In embodiments in which the side walls **31** of the outer housing **28** extend partially into the cabin **14** of the aircraft, the outer housing **28** contains at least one door **16** for accessing the top part of the inner housing **34**, when the inner housing **34** is in the loading position, since the top part of the inner housing **34** will generally remain within the outer housing **28**. When the inner housing **34** is in the stowed position, the floor panel **37** of the inner housing **34** serves as the bottom panel of the outer housing **28**, thereby closing the closet from any access from the cabin **14**. The outer housing **28** may also include a top panel **11** as illustrated in FIG. **1a**.

[0022] The moveable closet **10** is also preferably fitted with at least one and, more typically a plurality of tracks **26** for guiding the inner housing **34** between the loading and stowed positions. For example, as illustrated in FIG. **2**, a plurality of tracks extend vertically along the interior of the side walls **31** of the outer housing **28** for engaging corresponding tracks extending vertically along the side walls of the inner housing **34**. While tracks are useful for guiding movement of the inner housing **34** with respect to the outer housing **28**, it should be understood that a number of various alternative mechanisms for guiding the inner housing **34** may be utilized. Alternatively, the inner housing **34** and the outer housing **28** may be sized tightly enough and may be constructed of material(s) having a sufficiently low coefficient of friction to permit the snugness of the fit of the inner housing **34** within the outer housing **28** to guide the movement therebetween.

[0023] Although the moveable closet **10** may be manually moved, the moveable closet **10** is typically moved through the use of an actuation mechanism. Various actuation mechanisms may be utilized. For example, the actuation mechanism may include a motor **24**, such as a stepper motor, capable of moving the inner housing **34** between the loading and stowed positions. Although not shown in the figures, there would generally be a control mechanism, such as a switch or button, that the flight attendant could actuate to move the inner housing **34** between the loading and stowed positions.

[0024] As shown in FIG. **3**, since the moveable closet

10 does not require a cross aisle for accessing the articles contained within it, the moveable closet **10** can be placed immediately adjacent to a fixed structure **22**. This fixed structure **22** could be any of a number of necessary structures, but on an aircraft would most likely be a lavatory, galley or an additional fixed closet.

[0025] Another advantage of the moveable closet **10**, as illustrated in FIG. **3**, is the additional space it allows for passenger seats **40**. Since the moveable closet **10** can be displaced after it has been loaded, allowing for additional floor space within the cabin, passenger seats **40** can be placed much closer to the moveable closet **10** and still allow the passenger to move the seat **40** to the reclined position **38** once the closet has been displaced, such as while in transit. While the moveable closet **10** is in the loading position, which generally occurs while passengers are embarking and disembarking, the passenger seat **40** would need to be in the upright position **36**. When the inner housing **34** of the moveable closet **10** is in the stowed position inside the outer housing **28**, it is possible for a passenger to move the seat to the reclined position **38**. As shown in FIG. **3**, the inner housing **34** is preferably capable of raising high enough into the outer housing **28** to allow for adequate head clearance for the passenger and prevent the passenger from feeling claustrophobic once reclined beneath the moveable closet **10**.

[0026] Many modifications and other embodiments of the invention will come to mind to one skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the invention is not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

Claims

1. A moveable closet comprising:

an outer housing;
an inner housing defining a storage compartment and further defining an opening for accessing the storage compartment, said inner housing capable of being moved between a loading position in which articles are inserted through the opening into the storage compartment and a stowed position in which said inner housing is at least partially disposed within said outer housing; and
an actuation mechanism for moving said inner housing between the loading and stowed positions.

2. A moveable closet for an aircraft having at least one lengthwise extending aisle, the moveable closet comprising:

an outer housing; and
an inner housing defining a storage compartment and further defining an opening facing the lengthwise extending aisle for accessing the storage compartment, said inner housing capable of being moved between a loading position in which articles are inserted from the lengthwise extending aisle through the opening into the storage compartment and a stowed position in which said inner housing is at least partially disposed within said outer housing.

3. A moveable closet according to claim 1 or 2 wherein said outer housing is fixed in position.

4. A moveable closet according to the claims 1,2 or 3 wherein said inner housing comprises shelves for dividing the storage compartment.

5. A moveable closet according to any of the claims 1-4 wherein said inner housing comprises bars for hanging articles.

6. A moveable closet according to any of the claims 1-5 wherein said outer housing contains at least one door for closing a portion of the opening, each door capable of being opened to access the top portion of the storage compartment when said inner housing is in loading position.

7. A moveable closet according to any of claims 1-6 further comprising at least one track for guiding said inner housing between loading and stowed positions.

8. A moveable closet according to any of the claims 2-7 wherein said movable closet contains an actuation mechanism for moving said inner housing between loading and stowed positions.

9. A moveable closet according to any of the claims 2-8 further comprising an actuation mechanism for moving said inner housing between loading and stowed positions.

10. A moveable closet according to any of the claims 1-9 wherein said actuation mechanism comprises a motor capable of moving said inner housing between loading and stowed positions.

11. An interior assembly for an aircraft comprising:

a structure fixed in position within an aircraft cabin, said structure comprising at least one

wall defining a region of the aircraft cabin; and
a moveable closet disposed immediately adjacent said structure such that said structure blocks access to a portion of said moveable closet, said moveable closet defining a storage compartment and further defining an opening for accessing the storage compartment, said moveable closet capable of being moved between a loading position in which articles are inserted through the opening into the storage compartment and a stowed position in which said moveable closet is displaced relative to said structure.

12. An interior assembly according to claim 11 wherein said structure is at least one of a galley, a lavatory and a fixed closet.
13. An interior assembly according to claim 12 comprising a moveable closet according to any of the claims 1-10.
14. An interior assembly according to claim 13 wherein said moveable closet is raised upwardly from the loading to the stowed position.
15. An interior assembly according to claim 13 or 14 further comprising a seat proximate to said moveable closet, said seat capable of being reclined to a position partially underneath said moveable closet once said moveable closet is raised to the stowed position.

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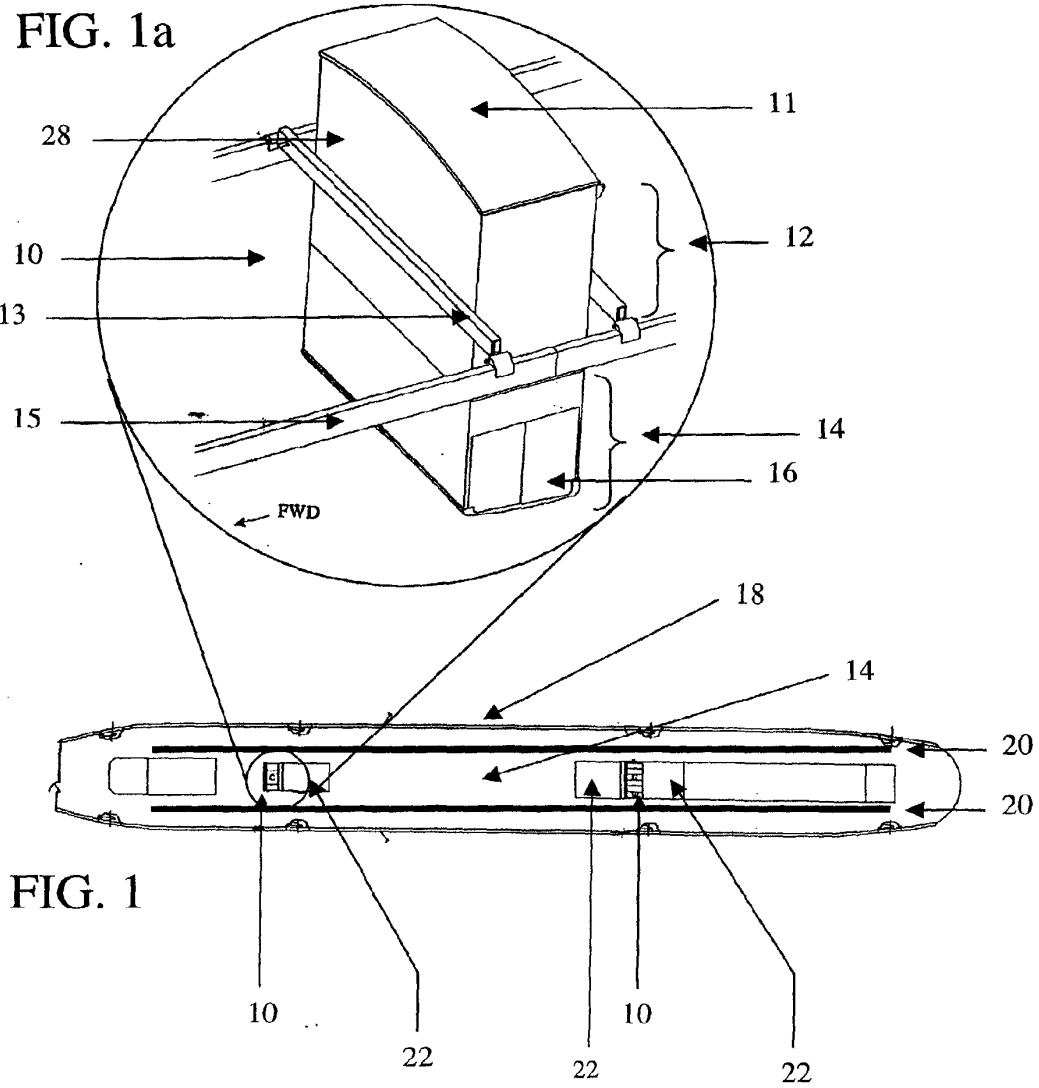


FIG. 2

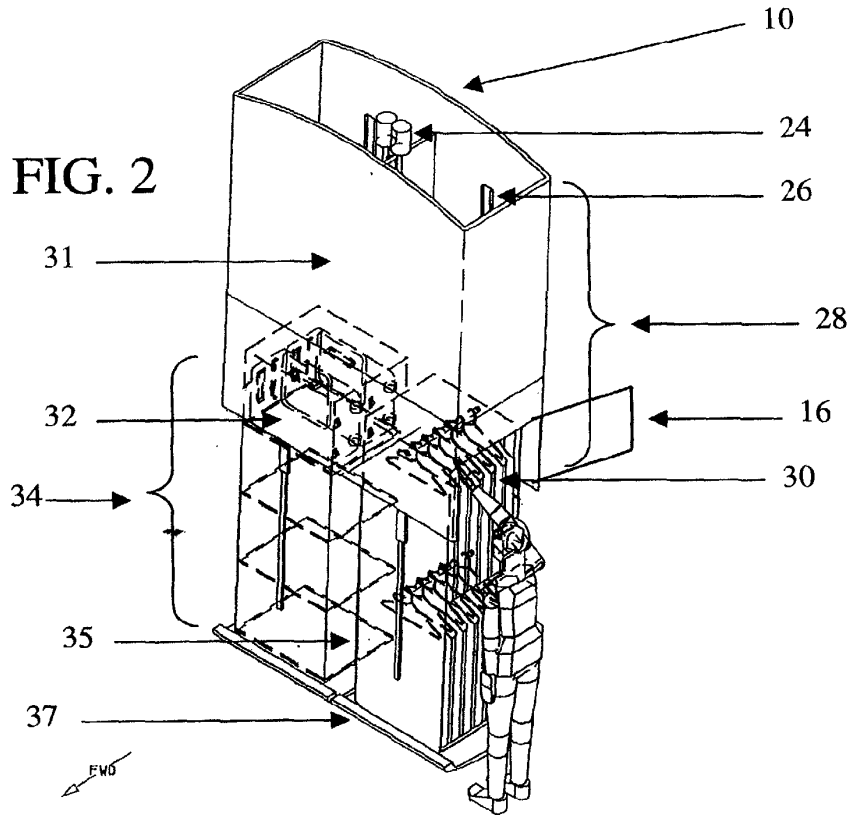
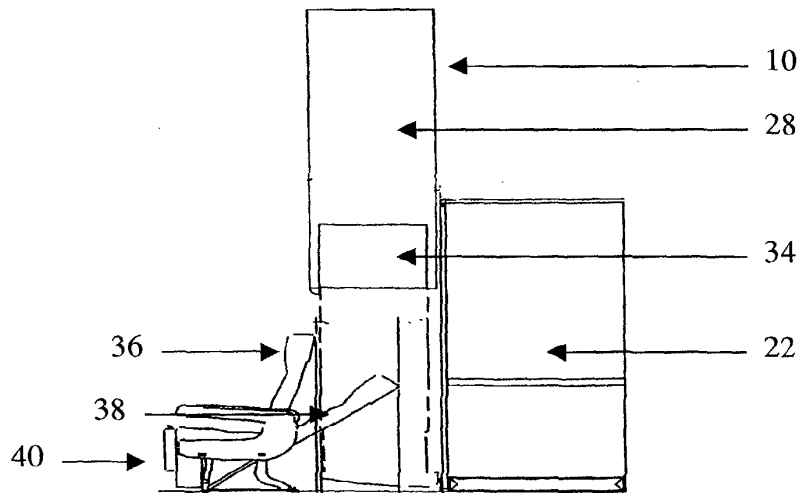
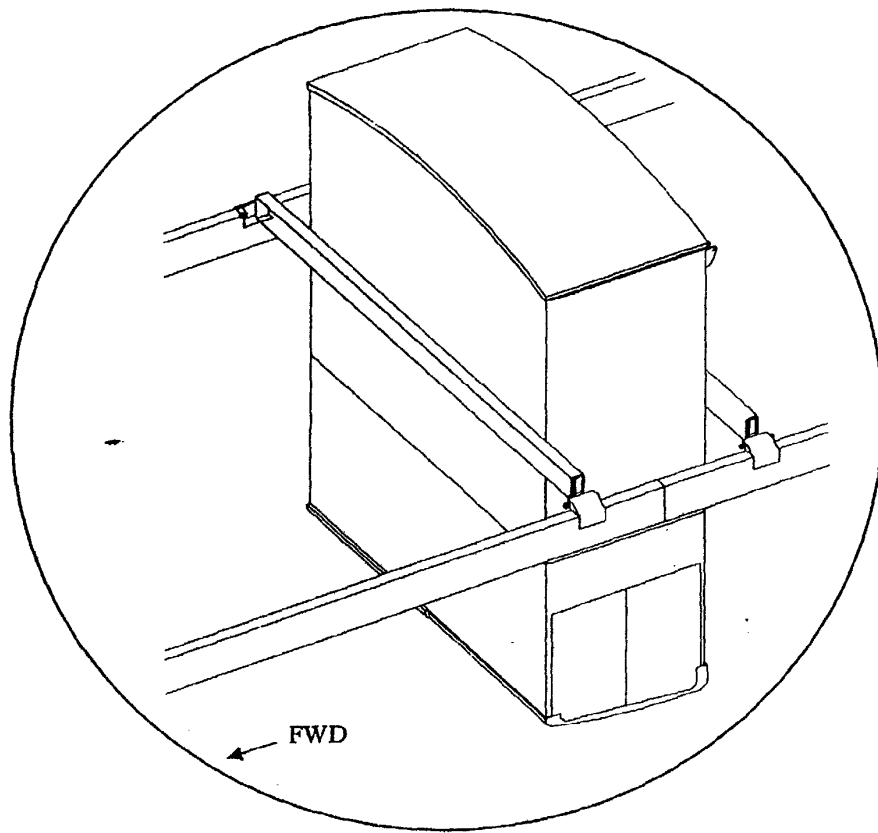
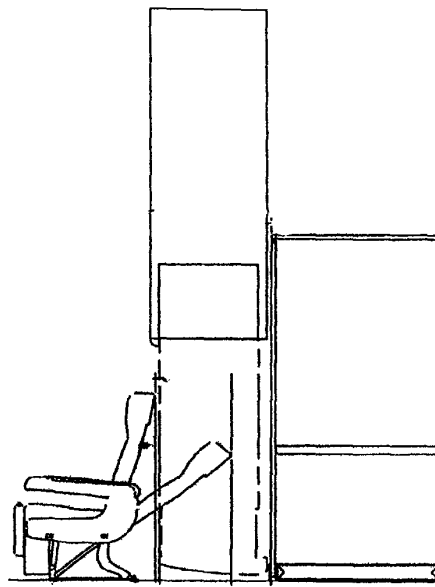


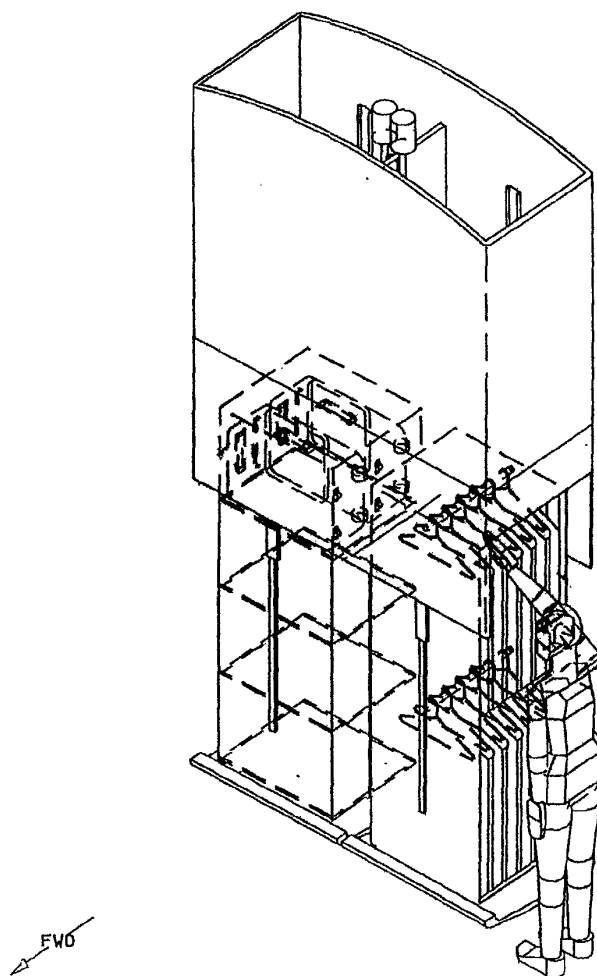
FIG. 3

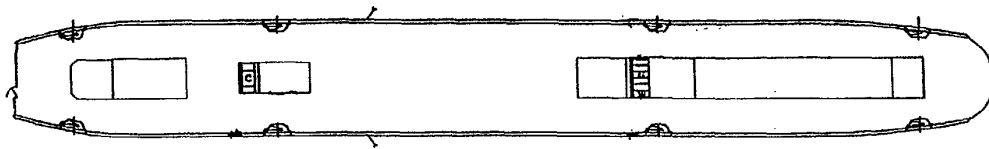






Left Side View





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European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 02 07 7954

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl. 7)
X	EP 1 116 651 A (EADS AIRBUS GMBH) 18 July 2001 (2001-07-18) * column 2, line 51 - column 6, line 30; figures *	1-3,7-15	B64D11/00 A47B88/00
X	US 5 456 529 A (CHEUNG KWUN-WING) 10 October 1995 (1995-10-10) * column 2, line 62 - column 8, line 34; figures *	1-4,6, 8-15	
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X	DE 36 40 284 A (BAER PETER) 1 June 1988 (1988-06-01) * the whole document *	1-4,7-10	
A	DE 297 09 636 U (USCHKEREIT GERD PROF) 31 July 1997 (1997-07-31) * the whole document *	1,2,5, 7-10	TECHNICAL FIELDS SEARCHED (Int.Cl. 7)
A	DE 195 37 135 A (NUMBERGER CHRISTIAN K) 10 April 1997 (1997-04-10) * column 5, line 57 - column 6, line 17; figures 8,9 *	1-10	B64D A47B
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 16 October 2002	Examiner Salentiny, G
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons % : member of the same patent family, corresponding document</p>			

EP0 FORM 1503 03/82 (P04201)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 07 7954

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on:
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16-10-2002

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EP 02 07 7954

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

PUB-NO: EP001281614A1
DOCUMENT-IDENTIFIER: EP 1281614 A1
TITLE: Retractable closet
PUBN-DATE: February 5, 2003

INVENTOR-INFORMATION:

NAME	COUNTRY
FARNSWORTH, JEFFREY D	US

ASSIGNEE-INFORMATION:

NAME	COUNTRY
BOEING CO	US

APPL-NO: EP02077954
APPL-DATE: July 18, 2002

PRIORITY-DATA: US92121201A (August 2, 2001)

INT-CL (IPC): B64D011/00 , A47B088/00

EUR-CL (EPC): B64D011/00

ABSTRACT:

CHG DATE=20030305 STATUS=O> A moveable closet (10) for storing articles in an aircraft includes a fixed outer housing (31) and a moveable inner housing (34) capable of being displaced from a loading position for articles to be placed within a storage compartment to a stowed position, which allows for additional cabin space during taxiing and flight. The storage compartment defined by the inner housing (34) may be further sub-divided by shelves (32) for storing articles of various sizes and may also be fitted with bars (30) in order to accommodate hanging items.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 April 2003 (03.04.2003)

PCT

(10) International Publication Number
WO 03/026495 A2

(51) International Patent Classification⁷: **A61B**
(21) International Application Number: PCT/US02/31932
(22) International Filing Date:
26 September 2002 (26.09.2002)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
60/324,871 26 September 2001 (26.09.2001) US
(71) Applicant and
(72) Inventor: **KEOGH, Marvin** [US/US]; 7309 Clybourn
Avenue, Sun Valley, CA 91352 (US).

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

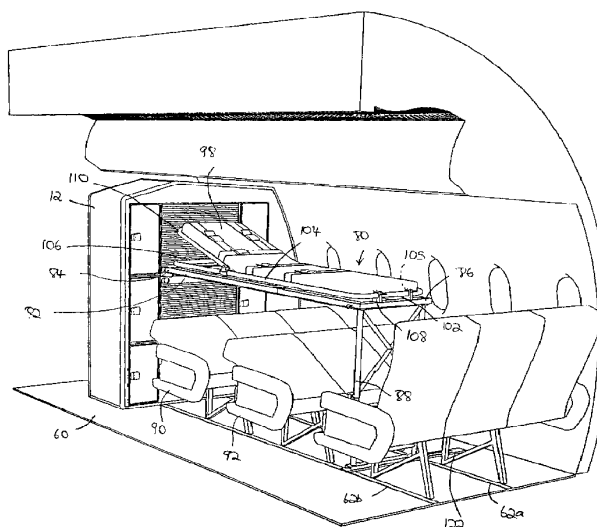
*without international search report and to be republished
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(74) Agent: **ABRAHAMS, Colin, P.**; Law Offices of Colin
P. Abrahams, 5850 Canoga Avenue, Suite 400, Woodland
Hills, CA 91367 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: AIRCRAFT MEDICAL UNIT



(57) Abstract: An aircraft medical unit comprises a front panel configured to fit in an aircraft cabin so as to form a divider inside the cabin and a spaced rear panel of substantially the same shape as that of the front panel. A side panel is constructed between the front and rear panels, and the front, rear and side panels defines a chamber. An access opening is formed in the front panel. A stretcher frame is provided and is movable between a folded and stowed position in the chamber and an unfolded and extended position to the outside of the chamber. The aircraft medical unit further includes at least one item of medical equipment used in the treatment of a patient.

WO 03/026495 A2

AIRCRAFT MEDICAL UNITField and Background of the Invention

This invention relates to medical units for use in aircraft. More particularly, the invention is for modular units which can be attached within the cabin of an aircraft, and especially in large commercial airliners configured for passenger transportation.

In this specification, the term "medical units" should be broadly interpreted to mean medical equipment and machinery typically used in the treatment of patients. All of this equipment and machinery is, in accordance with the invention, housed within a modular unit which can be placed in the cabin of an aircraft, or other convenient location in an aircraft, so that the contents are generally hidden from view, and the modular unit occupies as little space as possible, until needed. The equipment and machinery which may comprise the medical unit includes, but is not limited to, stretchers which can be folded out and retracted in relation to the medical unit, power systems and power adaptation units, incubators, refrigerators, appropriate lighting mechanisms, communication systems for use by personnel operating the medical unit to communicate with either other crew members within the aircraft or medical and health professionals in remote ground locations, various body-function monitoring devices, and the like. These are representative examples only, and the scope of the invention is such that the extent and use of such equipment can be varied according to the situation. Other types of equipment which may be incorporated into the medical unit of the invention will be discussed during the course of this specification.

Air transportation is, of course, a major industry for the conveyance, on a large scale, of substantial numbers of people between many locations. Depending upon the size of the jet liner, commercial air liners during flight may be transporting anywhere from about 50 to nearly 500 passengers. While it is not unusual for some aircraft, particularly the larger aircraft with substantial numbers of passengers, to carry certain medical equipment to treat onboard medical emergencies, such equipment found on board is typically very limited in scope, and only capable of treating some of the most basic medical problems.

Furthermore, the issue of space in an aircraft cabin is critical in commercial airliners, and compacting galleys, storage areas and other components/compartments to an optimal degree allows more passengers to be accommodated within the aircraft.

The typical layout in an aircraft cabin consists of both rows and lines of seats extending

down the length of the cabin. At certain intervals, walls or dividers are formed between rows of seats, and these have the effect, amongst other things, of separating the aircraft cabin into preselected and desired areas. The dividers, may, therefore, divide a large cabin into different classes of passenger travel, such as first class, business class and economy class. They also typically define one or more galley areas where flight attendants are able to prepare food and drinks.

As an example of the limited nature of any relevant prior art, U.S. Patent No. 4,115,884 (Keogh) discloses a carrier for medical stretchers on aircraft. The installation consists of two frames with vertical and diagonal members supporting a horizontal rack, which has clamps with which to attach the stretcher to a top surface.

One of the purposes of the present invention is therefore to provide an aircraft medical unit to include a plurality of modern devices used in health care treatment, especially configured for optimum use inside the cabin of an aircraft.

Summary of the Invention

In one aspect, the present invention utilizes an adaptation of a wall or divider within the cabin of an aircraft. The divider of the present invention may comprise a pair of spaced walls defining a chamber or space which, as will be discussed in greater detail below, is designed to compactly house various forms of medical equipment. Particularly, this medical unit of the invention comprises a module, which, in the normal course, partitions off areas within the cabin. However, the spaced-apart walls form a closet or space between them, in which medical equipment may be stored and easily accessed when needed. An important component of the medical unit, in modular form as described above, would be the presence of a stretcher, located within the space between the walls, which can be unfolded out of the space, and formed into a substantially horizontally positioned bed for use by a person requiring medical treatment.

The present invention thus takes advantage of typical cabin layout which utilizes partitions or dividers between sections of the aircraft cabin. Presently, these dividers may consist of nothing more than panels, which of course divide sections of the aircraft so that one section cannot be seen by passengers in an adjacent section. In most instances, the dividers may be no more than 4-8 inches thick, serving as they do, as physical dividers and nothing more. The invention, in one aspect, slightly expands these dividers so as to form a double-paneled unit, defining a space, and

placing within the space a potentially vast array of sophisticated medical equipment, in addition to a stow-away stretcher. Compacting all this equipment into such an area, termed herein a medical unit, not only has the advantage of optimal space utilization, but also serves to keep medical equipment generally out of sight of passengers, but at the same time providing very easy access to such stored equipment should it be needed.

The medical unit of the invention would, in a preferred form, comprise various doors to chambers which may house various forms of medical equipment and supplies, ranging from simple first aid and/or trauma kit supplies to sophisticated medical equipment, including respirators, suction apparatus, oxygen equipment, defibrillators and the like. Thus, the space in the medical unit of the invention may be further divided into cupboards, chambers, accessible recesses etc., all of which are configured to best accommodate the different forms of equipment being stored.

The medical unit may further comprise a monitor, global positioning system (GPS), and cameras which may allow personnel and passengers on board to communicate, when necessary, with a doctor in a land-based hospital, contacted to provide guidance and information for on-board medical treatment. Preferably, the medical unit will be constructed as a modular unit, manufactured in an appropriate facility, and designed to be rolled in and installed in a specific aircraft. Therefore, the unit would typically have a vertical edge, a horizontal edge for mounting on the floor, and a contoured edge which would be custom-shaped to fit within the body of a specific commercial airliner, such as a Boeing 747, Airbus 320, or the like.

In a preferred form, the modular medical unit would easily attach to existing structural fasteners already located in the aircraft, so that they may be easily installed and removed as desired. Further, larger aircraft may be designed to accommodate more than one modular medical unit. In yet another form, a plurality of modular medical units of the invention may be lined up and installed within an aircraft cabin or cargo bay for transportation to remote sites where emergency workers may require temporary hospital facilities.

A significant advantage on the present invention is its compactness. The medical unit of the invention facilitates storage of a significant number of medical devices and pieces of equipment within a very small area, some of which may be folded out for use when needed. The invention thus would meet the needs and requirements of commercial carriers, which would be able to install sophisticated medical equipment capable of treating a wide range of conditions, but, when not needed, would take up very little space, and further be invisible to passengers. In other

words, the medical unit of the invention may not even be recognizable as such when in a closed or unused position, and would merely appear to the casual observer to be a wall or divider separating the cabin into conventional and recognizable segments.

According to one aspect of the invention, there is provided an aircraft medical unit comprising a front panel configured to fit in an aircraft cabin so as to form a divider inside the cabin; a rear panel of substantially the same shape as that of the front panel and spaced therefrom; a side panel between the front and rear panels, the front, rear and side panels defining a chamber; an access opening in the front panel; and a stretcher frame, movable between a folded and stowed position in the chamber and an unfolded and extended position to the outside of the chamber. Preferably, the front panel is configured so as to fit in the aircraft cabin between rows of seats, the front, rear and side panels following the contour of the shape of at least a portion of the aircraft cabin, the medical unit comprises at least one item of medical equipment used in the treatment of a patient.

The equipment may be selected from amongst the following: a monitor, a camera, a refrigerator, an incubator, a defibrillator, a respirator, an oxygen supply, and an autoclave.

Preferably, the access opening can be opened and closed by doors, which may comprise a pair of slidable shutters which run in tracks formed within the chamber of the medical unit. The aircraft medical unit may further comprise a plurality of cupboards, each cupboard accommodating selected medical equipment or machinery.

In one embodiment, the stretcher frame comprises a head end portion, a foot end portion and a foot end support leg, wherein the head end portion and foot end portions, and the foot end support leg are pivotally connected to each other so as to fold for stowage within the chamber, the head end portion and foot end portion unfolding in the extended position to form a substantially rectangular stretcher frame, and the foot end support leg being attached to the foot end portion and unfoldable with respect thereto, the head end portion being securely fastened to a clamp within the chamber when in the extended position, and the foot end support leg being unfolded to fasten to the aircraft cabin when in the extended position.

Preferably, the aircraft medical unit further comprises a mattress frame and an associated mattress connectable to the stretcher frame. Adjustable lighting for positioning over the stretcher may also be provided.

Preferably, the aircraft medical unit further comprises a power unit. Also, a power

converter for converting aircraft power into a power source usable by the medical equipment may be provided.

The stretcher frame may be spring-mounted within the chamber to facilitate movement thereof between the folded and the stowed position on the one hand, and the unfolded and extended position on the other. Further, a clamping member for attaching an item of medical equipment to the stretcher frame at a desired location may be provided.

In one form, attachment members are provided for securing the medical unit to tracks constructed in the cabin of the aircraft.

Brief Description of the Drawings

Figure 1 is a perspective rear view of a medical unit in accordance with the invention;

Figure 2 is a front view of the medical unit of the invention as shown in Figure 1 of the drawings, generally in the closed or unused position;

Figure 3 is a rear perspective view of the medical unit of the invention, when installed within the cabin of an aircraft, shown generally with the stretcher in the unfolded position and the appropriate seat backs down;

Figure 4 is a front perspective view of the medical unit of the invention, showing the stretcher in the unfolded or in-use position, and the appropriate seats in the seat-back down position;

Figure 5 is a side view of the medical unit of the invention, with the stretcher in the unfolded position;

Figure 6 is a side cross-sectional view through the medical unit of the invention, showing the position of the stretcher in both the folded and the unfolded positions (only one of the positions being possible at a time);

Figure 7 is a front view of the medical unit of the invention, with the stretcher in the unfolded position;

Figure 8 is a detailed cross-sectional view of the stretcher in the medical unit, shown in the folded or non-use position; and

Figure 9 is front view of the medical unit of the invention illustrating some of the equipment and machinery associated therewith.

Detailed Description of the Invention

Reference is now made to the accompanying drawings which show different applications and conditions of the medical unit, in accordance with the present invention.

With reference to Figure 1, there is shown a medical unit 12, from a rear view perspective, which generally comprises a rear panel 14, a front panel 16, and side wall, indicated generally by reference numeral 18. The front and rear panels 16 and 14, and the side wall 18, define a chamber 20 for housing various items of medical equipment and machinery, as will be described. The side wall 18 comprises a base wall 21, including a mechanism for fastening the medical unit 12 to existing tracks in an aircraft, as will be described below. Additionally, there is provided a contoured wall 22, a top wall 24 and an aisle wall 26, all of which constitute the side wall 18. The rear panel 14 further includes an access door 28, which can be opened and closed as appropriate for the purposes of installing, maintaining and servicing components of the medical unit.

Figure 2 of the drawings shows the medical unit 12, and particularly a front view thereof. The front panel 16 is clearly shown, and comprises a central portion 30, and lateral portions 32 and 34. The central portion 30 includes an upper slidable shutter 36 and a lower slidable shutter 38 which may be moved upwardly and downwardly respectively in order to gain access to the chamber 20, and its contents. Below the lower slidable shutter 38 is a fixed panel 40.

The lateral portion 32 comprises three stacked cupboards 40a, 40b and 40c, each of which has its own door 42, and each door 42, which may be mounted on hinges, can be opened or closed by manipulating the handle 44 associated therewith. Likewise, the lateral portion 34 also has three stacked cupboards 46a, 46b and 46c, each of which has a door 42, preferably mounted on hinges, which open and close using handle 44.

As a general rule, the central portion 30 of the medical unit 12 provides access to a stretcher contained within the chamber 20, to be described more fully below, by opening and closing the upper and lower slidable shutters 36 and 38 respectively. The slidable shutters 36 and 38 may be easily moved within rails, to be discussed, using the handles 50 and 52. Once the stretcher has been unfolded from within the chamber 20, the slidable shutters 36 and 38 can be substantially closed, with the stretcher extending outwardly from the chamber 20 through a space between the edges of the upper and lower slidable shutters 36 and 38 respectively.

While the stretcher access through the upper and lower slidable shutters 36 and 38 is generally shown in the somewhat centered position in Figure 2 of the drawings (as well as other

drawings in this application), there is nothing in this invention which should be seen as limiting the location of the stretcher to this central area. Indeed, the stretcher can be appropriately placed laterally, centered, or anywhere in-between, and the optimal position may be determined by the exigencies of the particular aircraft in which the medical unit 12 is located.

5 The stacked cupboards in the lateral portion 32, as well as the stacked cupboards in lateral portion 34, may be individually designed to contain various forms of equipment. As an example only, the cupboard 40c may contain special lighting equipment which can be pulled out and adjusted over the stretcher. The cupboard 40a may contain first aid materials and the like. As a matter of practicality, it may be advantageous to place in the stacked cupboards 46a, 46b and 46c
10 heavier equipment, or equipment which may be more infrequently used, or can be adjusted from a distance. It will be appreciated that the stacked cupboards in the lateral portion 34 may be just slightly less accessible than those stacked cupboards on the lateral portion 32, and the placement of different types of medical equipment will, of course, be made according to this and other criteria.

15 Figure 3 of the drawings shows a rear perspective view of the medical unit 12 when installed within the cabin of an aircraft. Only a small representative section of the cabin is shown, and comprises a floor 60, having a pair of seat tracks 62a and 62b. Further, there is provided an inner wall 64, and an outer wall or skin of the aircraft 66. A space 68 is formed between the inner wall 64 and the skin 66, and is conventionally used for electrical wiring, piping and the like, and
20 the importance of these will be discussed further below in describing how the medical unit 12 of the invention may tap into certain aircraft systems and resources in order function more effectively.

 In Figure 3, it can be seen that a cabin ceiling 70 is provided, and to one side thereof conventional rows of baggage compartments 72 are installed. Like conventional dividers in
25 aircraft cabins, the medical unit 12 of the invention is designed to properly fit within existing cabin structures, and in fact resembles from the outside in large part a simple divider.

 It will thus be noted that the base wall 21 of the medical unit 12 rests firmly on the cabin floor 60. The medical unit 12 is secured on the floor 60 by attaching it with appropriate bolts, or other conventional hardware, to existing seat tracks 62a and 62b, which are present as part of the
30 construction in an airliner cabin.

 The contoured wall 22 of the medical unit 12 is constructed so as to properly engage with

the contoured inner wall 64. The top wall 24 of the medical unit 12 fits in below the baggage compartments 72, while the aisle wall 26 of the medical unit 12 is generally exposed and, with other structures in the cabin, forms a passage through which access from one portion of the cabin to another is secured. It will be seen that the door 28, as shown in Figure 3, provides enlarged
5 access to the chamber 20 of the medical unit 12, so that personnel may have better access to the contents of the chamber 20 in order to effect installation and maintenance, as may be necessary.

Reference is now made to Figure 4 of the drawings which shows a front perspective view of the medical unit 12 of the invention, with the stretcher 80 in the unfolded or usable position. One aspect of the invention comprises the availability of a stretcher, generally designated by the
10 reference numeral 80, which can be, for the most part, in a stowed position when it is not needed. Most of the time, of course, the stretcher is not needed, and, in this regard, the medical unit 12 provides a very compact space in which the stretcher 80 can be stored. While the availability of the stowed stretcher 80 is an important aspect of the invention, another aspect of the invention relates to the provision of essential medical equipment and machinery in the vicinity of the
15 stretcher 80, so that such equipment can be available for use on an as needed basis. The unfolding and setting up of the stretcher 80 enables the patient to be properly and comfortably positioned, an important factor which must be established before appropriate medical treatment can be provided.

The stretcher 80 in Figure 4 of the drawings generally comprises a base frame 82, the base
20 frame 82 having a fixed end 84, and an unsecured end 86. The fixed end 84 is attached to components within the chamber 20 of the medical unit 12, while the unsecured end 86 is fixed to a rear support 88. The base frame 82 is thus supported at both ends. At its fixed end 84 it is attached to components within the chamber 20, and at its unsecured end 86, the rear support 88 extends between the base frame 82 and the floor 60, and preferably connects to the seat tracks
25 62a and 62b, so that the base frame 82 of the stretcher 80 is very firmly and stably fixed. This proper fixing of the stretcher 80 within the cabin is of considerable importance in view of the significant forces which may be placed on the stretcher 80 by virtue of the aircraft movement including take-offs and landings.

As will be seen in Figure 4 of the drawings, two rows of seats 90 and 92 are adjusted so
30 that their seat backs are folded forwards, to thus create the vertical clearance necessary for the positioning of the stretcher 80.

Once the base frame 82 of the stretcher 80 has been unfolded from the medical unit 12, a mattress frame 96, and mattress 98 are connected to the base frame 82. The mattress frame 96 has a head end 100, a foot end 102, and a pair of side portions 104 and 105 respectively. The head end 100 is secured within a pair of top clamps 106, while the foot end 102 is secured within a pair of bottom clamps 108. The mattress 98 is firmly held within the mattress frame 96, and an elevator frame 110 may be provided so that the patient may be placed with his or her head elevated or inclined, as may be necessary for comfort or treatment. It will be noted that the mattress 98 has a series of straps and clamps, which will not be discussed in any further detail, all or some of which may be used to secure the patient to the mattress 98, as may be required.

The rear support 88 folds away from the base frame 82 so as to preferably be at right angles thereto. The rear support 88 comprises a pair of fixed legs 116, in each of which is located a telescoping leg 118, the telescoping leg 118 being adjustable with respect to the fixed leg 116 so as to place the base frame 82 in a substantially horizontal position, or slightly inclined, as may be required. The telescoping legs 118 are joined by a base plate 120 which has the necessary structure and hardware to enable the rear support 88 to be fastened to the seat tracks 62a and 62b. Furthermore, the aircraft may be provided with a special stretcher-fastening track 122, shown in Figure 4 of the drawings, the fastening track 122 being substantially at right angles to the seat tracks 62a and 62b, and designed to receive at least a portion of the base plate 120.

Although not specifically shown in Figure 4 of the drawings, the stretcher 80 may further comprise one or more straps or belts, having one end fixed to the stretcher 80, and the other end peg to a connecting portion in the cabin, such as the seat tracks 62a and 62b. In certain circumstances, such belts may provide additional stability to the stretcher 80 so that its relative movement is reduced in response to the natural flying motions of the aircraft.

Reference is now made to Figure 6 of the drawings which shows a cross-sectional side view, similar to the view shown in Figure 4 and Figure 5, but also showing the stretcher in the folded position within the chamber 20 of the medical unit 12. The stored/stowed position of the stretcher 80, as shown in Figure 6 of the drawings will be described in further detail with reference to Figure 8 of the drawings. However, it can be seen in Figure 6 that the top clamp 106a is held in a fixed position when the stretcher 80 is in the unfolded position, and is designed to be at the appropriate height when the stretcher 80 is in the unfolded position. Figure 7 of the drawings shows a view of the medical unit and unstowed stretcher when looking towards the

front thereof, also showing the various cupboards and/or compartments designed to house various items of equipment and machinery. As has been mentioned, the medical unit 12 of the invention may comprise any one or more of a fairly wide range of equipment and machinery, and many of these items require power. Other pieces of equipment may require oxygen, wiring for various forms of communication, and the like, and to the extent possible, the medical unit 12 of the invention taps into existing power and other systems in the aircraft.

The power lines, oxygen conduits, electrical and communication wirings and the like, may be conveyed in different forms and locations, depending on the type of aircraft. Thus, these sources may be contained in the space 68 formed between the outer skin or the aircraft and the inner wall 64. Alternatively, these sources may run under the floor 60 of the cabin, or above the ceiling 70. For the purposes of this invention, it does not really matter where the sources are located, but a medical unit 12 designed for a specific aircraft would, of course, take these factors into account so that appropriate connectors to power, oxygen and communication systems can be readily achieved. As an example only, Figure 7 shows an oxygen supply line 130 and an electrical supply line 132 running in the space 68. The oxygen supply is tapped by means of a connector 134, so that aircraft oxygen can be used, where necessary, by equipment contained within the medical unit 12 for patient treatment. Likewise, a connector 136 taps into the electrical supply of the aircraft so as to power the various pieces of equipment and systems which may form part of the medical unit 12. Also shown running through the space 68 are communication lines 138, which are tapped by connector 140 and directed to appropriate equipment within the medical unit 12 for use as needed, so that personnel operating the medical unit 12 can establish the desired lines of communication both within the aircraft, and with land-based resources.

Reference is now made to Figure 8 of the drawings, which shows a detailed view of one embodiment of the stowed stretcher 80, contained within the chamber 20 of the medical unit 12. The medical unit 12 is shown as comprising the components discussed above, including the base wall 21, rear panel 14, top panel 24, upper slidable shutter 36, lower slidable shutter 38, the door 28 and various other components. As will be noted from Figure 8, the base frame 82 is in a folded condition/position, and comprises a forward section 150, and a rear section 152, connected to each other by means of a hinge 154. The rear support 88 is pivotally or hingedly connected to the rear section 152 and folds out to a position essentially normal to the rear section 152 so as to provide the necessary support as shown in, for example, Figure 6 of the drawings. The base frame

82, when in the folded position, shows one of the top clamps 106, and a bottom clamp 108, the clamps 106 and 108 being configured so as to receive the mattress frame 96. In the particular embodiment shown, the mattress frame 96, also contained within the chamber 20, is unfolded independently and positioned on the base frame 82, and thereafter clamped into position using
5 clamps 106 and 108. In alternative embodiments, the mattress frame 96, as well as the mattress 98 may also be foldable, so that when the base frame 82 is unstowed, the mattress frame 96 and mattress 98 are already in position.

Within the chamber 20 of the medical unit 12, there is provided a track 158, and a bracket 160, attached near the fixed end 84 of the base frame 82, including a wheel, or other component,
10 which slides up and down in the track 158 when the base frame 82 is moved between the stowed and unstowed positions. In Figure 8 of the drawings, the bracket 160, when shown near the base wall 21, illustrates its position when the base frame 82 is in the stowed position, and the illustration of the bracket 160a, extending outside the chamber 20, illustrates its position when the base frame 82 is in the unstowed or extended position.

The bracket 160 includes a reel 162, upon which a cable 164 can be wound. The cable 164
15 connects at one end to the reel 162, and to a winch-like or cable attachment structure 166 mounted in the chamber 20. The structure 166 may include spring-biased components so as to draw in the cable 164, and to facilitate unstowing of the base frame 82, when the stretcher 80 is required. Alternately, the spring-biasing may be in the reel 162.

In order to move the stretcher 80, and more particularly the base frame 82 thereof, from
20 the stowed to the unstowed position, the upper slidable shutter 36 is moved upward to slide into an open position, along the tracks 170. Similarly, the lower slidable shutter 38 is moved downwardly along track 172, at which point an opening is provided to access the base frame 82. The operator then pulls the forward section 150 upwardly and outwardly, so that the bracket 160
25 runs along the track 158, and, at the same time, the forward section 150 moves out from the chamber 20 and into the cabin of the aircraft, as illustrated, for example in Figure 6 of the drawings. When the bracket 160 has reached the position shown as bracket 160a, the rear section 152 is unfolded by pivoting it about the hinge 154, so that the forward section 150 and the rear section 152 together make up a substantially rectangular base frame 82. The rear support 88 is
30 then pivoted or unfolded downwardly so that the base plate 120 is on the floor 60 of the cabin, and supports the base frame 82. The base frame 82 is thus supported by the clamp 160a and the

rear support 88. A locking mechanism may be provided to place the bracket 160a in a position so that movement thereof will be restrained, to provide additional stability to the stretcher 80 when in the unstowed position.

5 In order to facilitate unfolding, the user is assisted by the operation of the cable 164, which tends to raise the base frame out of the chamber 20. Reference numeral 164a shows the cable in its position when the stretcher is in the unstowed position.

10 It will be appreciated that only one of many embodiments of a folded and stowed stretcher 80 is shown in Figure 8 of the drawings. It is not intended that the invention in any way be limited to the specific structure and configuration of the foldable stretcher 80 shown in the various drawings. The only factor of importance in this regard is that the stretcher 80 is configured and dimensioned such that it can move in and out of an access space, which may be opened and closed in the medical unit 12. The importance of the invention is that a stretcher 80 is provided, but in normal circumstances is stowed in a relatively compact area until it is needed.

15 Reference is now made to Figure 9 of the drawings, which illustrates a representative example of the types of equipment and machinery which may be used in the medical unit 12 of the invention. In Figure 9, for illustrative purposes, the doors to the various enclosures have been removed. Thus, on the one side, a schematic view of the inside of stacked cupboards 40a, 40b, and 40c are shown, while on the other side, stacked cupboards 46a, 46b and 46c are shown with their interiors exposed. Within these various closets, which of course extend back into the chamber 20 and preferably utilize as much of the space as is possible, a wide variety of different types of equipment can be stored. Examples of such supplies and equipment include trauma kits and bags 182, which may include dressings, bandages 184, eye pads, antibiotic ointments, blood pressure kits 186, blankets, stethoscopes 188 and forceps, to name just a small selection of more commonly used items. These may be arranged conveniently on shelves 190, shown in this example as being contained in the closet 40c. The kits may be divided and prepared according to the type of condition being treated, so that in the case of an emergency medical treatment on board, the user could access a kit within the medical unit 12 of the invention which essentially contains all of the supplies necessary to treat that condition.

25 In addition to the basic medical first aid supplies, more sophisticated equipment may be provided and appropriately connected to sources of power which enable their operation. Examples of such equipment which may be included in the medical unit are respirators 192, IV

infusion pumps 194, as well as their requisite controls, suction apparatus, defibrillators 196, blood pressure equipment 198 and resuscitators, to name but a few. Some of these items are illustrated schematically in Figure 9 of the drawings, and each may be positioned according to its size and likelihood of use. The invention is not, however, intended to be limited to any specific type or combination of equipment that may be stored in the medical unit 12, but it should be appreciated that the medical unit 12 itself can accommodate a wide variety of equipment, and combinations thereof.

In addition to the equipment for treating patients, the medical unit 12 of the invention may also comprise a monitor 200, a camera 202, communication equipment and Global Positioning Systems 204. This equipment may enable passengers or crew within the aircraft to make real-time contact with doctors, hospitals or other health providers who are able to provide relevant guidance and information to assist in the treatment process. For example, the medical unit 12 may include a camera 202 which may photograph the patient and transmit the information to a doctor or hospital which is land based. A health professional would be able to guide people treating the patient, and the land based health professional can monitor patient color or complexion, wounds, or treatment processes, and provide immediate guidance. Further, information from outside sources may be communicated to the system and displayed on the monitor, which may provide assistance to the people treating the patient.

In another form, the medical unit may also comprise lighting equipment 206 which may be stored within or outside of the chamber 20, and which can be removed and appropriately located over the patient to provide sufficient light. Clocks, timers and other basic equipment may also form part of the medical unit.

In a preferred form, the medical unit of the invention would tap into the power and oxygen supply within the aircraft generally. However, additionally, the medical unit would also have its own power supply system in the form of a battery or other component, or oxygen tanks, which could be relied upon if other systems within the aircraft failed. In addition to the power supply system, the medical unit may also comprise power interface systems so that the aircraft power can be modulated or changed to a form which can be used by any of the components within the medical unit. As an example, some aircraft may provide power at 110 volts and 400 cycles, and this may be changed by appropriate equipment to 110 volts and 60 cycles, a form which may be used by most of the equipment. Further, an inverter may be provided for changing DC power to

AC power, or vice versa.

The medical unit may also comprise its own oxygen supply 226. In Figure 9, an auxiliary power unit or generator is shown at 228, while appropriate convertor means 230 are shown in the same Figure, and this may be used for converting the aircraft power systems to a usable form by apparatus and equipment within the medical unit.

Additionally, it should be noted that some or all of the equipment and machinery contained in any one of the closets, or surrounding the medical unit, may be removed therefrom and placed with appropriate clamps around the stretcher, preferably on the base frame 82 or the mattress frame 96. Thus, for example, a camera 202 may be removed from the closet, and clamped onto the mattress frame 96 at an appropriate location, so that the camera is directed into the desired position. The camera may be joined to power and other communication lines either by cable, or it may contain its own power unit or battery, and transmit wirelessly to the medical unit for onward transmission, as required. Similarly, lighting may be appropriately placed around the stretcher 80 by clamping it, as discussed, as may be any other of the equipment/machinery contained within or as part of the medical unit.

The medical unit 12 may further comprise other pieces of equipment such as a refrigerator 205, an autoclave 208 for sterilizing instruments, and may also include such equipment as an incubator, not specifically shown in the drawings.

In Figure 5 of the drawings, there is also illustrated a typical securing means which could optionally be installed to provide further support and integrity to the stretcher 80 when in the unfolded position. In Figure 5, the stretcher 80 has a belt 216 connected at hinge 218, or indeed at any other point along the stretcher 80, and extends obliquely down towards the floor 60 of the cabin, where it fastens to a connector 220 on the floor 60 of the craft. The purpose of this belt 216 is to counteract the natural forces which may arise due to the acceleration or deceleration of the aircraft. The aircraft moves in the direction indicated by arrow 222 in Figure 5. When accelerating, the stretcher 80 would therefore tend to move backwards, towards the rear of the aircraft due to the acceleration forces. Any such movement is significantly and substantially restrained by the belt 216 fastened to the floor 60 of the cabin. When the aircraft is decelerating, the front panel would serve to operate as a barrier, and prevent any forward movement as a result of the deceleration forces.

It will be appreciated that the medical unit of the invention is not limited to the precise

details which have been described above. The precise shape, width and configuration of cupboards shown in the drawings and described herein may be varied depending on the type of equipment which is stored. Further, the nature of storing the stretcher, and the manner in which it unfolds, can vary. Of course, the medical equipment stored within the medical unit can vary widely, both
5 in terms of the amount of equipment, as well as its nature.

While, for most purposes, a passenger commercial airliner may typically only require one medical unit 12 on board, there is nothing to prevent a plurality of such units from being located and spaced about the aircraft. Different units within an aircraft may be either more or less sophisticated, depending upon anticipated requirements. Further, an aircraft may be converted
10 into a mobile hospital of sorts by installing a plurality of the medical units 12 spaced throughout the cabin, so that an aircraft can travel to an emergency area, and stretchers unfolded in each unit so as to provide multiple treatment bays on the aircraft.

CLAIMS:

1. An aircraft medical unit comprising:
a front panel configured to fit in an aircraft cabin so as to form a divider inside the cabin;
a rear panel of substantially the same shape as that of the front panel and spaced
5 therefrom;
a side panel between the front and rear panels, the front, rear and side panels defining a chamber;
an access opening in the front panel; and
a stretcher frame, movable between a folded and stowed position in the chamber and an
10 unfolded and extended position to the outside of the chamber.
2. An aircraft medical unit as claimed in claim 1 wherein the front panel is configured so as to fit in the aircraft cabin between rows of seats, the front, rear and side panels following the contour of the shape of at least a portion of the aircraft cabin.
- 15 3. An aircraft medical unit as claimed in claim 1 further comprising at least one item of medical equipment used in the treatment of a patient.
4. An aircraft medical unit as claimed in claim 3 wherein the equipment is a monitor.
5. An aircraft medical unit as claimed in claim 3 wherein the equipment is a camera.
6. An aircraft medical unit as claimed in claim 3 wherein the equipment is a refrigerator.
- 20 7. An aircraft medical unit as claimed in claim 3 wherein the equipment is an incubator.
8. An aircraft medical unit as claimed in claim 3 wherein the equipment is a defibrillator.
9. An aircraft medical unit as claimed in claim 3 wherein the equipment is a respirator.
10. An aircraft medical unit as claimed in claim 3 wherein the equipment is an oxygen supply.
11. An aircraft medical unit as claimed in claim 3 wherein the equipment is an autoclave.
- 25 12. An aircraft medical unit as claimed in claim 1 wherein the access opening can be opened and closed by doors.
13. An aircraft medical unit as claimed in claim 12 wherein the doors comprise a pair of slidable shutters which run in tracks formed within the chamber of the medical unit.
14. An aircraft medical unit further comprising a plurality of cupboards, each cupboard
30 accommodating selected medical equipment or machinery.
15. An aircraft medical unit as claimed in claim 1 further comprising an access door in the rear

panel for providing access to the chamber for installation and maintenance.

16. An aircraft medical unit as claimed in claim 1 wherein the stretcher frame comprises a head end portion, a foot end portion and a foot end support leg, wherein the head end portion and foot end portions, and the foot end support leg are pivotally connected to each other so as to fold for storage within the chamber, the head end portion and foot end portion unfolding in the extended position to form a substantially rectangular stretcher frame, and the foot end support leg being attached to the foot end portion and unfoldable with respect thereto, the head end portion being securely fastened to a clamp within the chamber when in the extended position, and the foot end support leg being unfolded to fasten to the aircraft cabin when in the extended position.

17. An aircraft medical unit as claimed in claim 1 further comprising a mattress frame and an associated mattress connectable to the stretcher frame.

18. An aircraft medical unit as claimed in claim 1 further comprising a belt extending between the stretcher frame at its one end, and fastenable to the cabin at its other end, to provide further stability to the stretcher frame when in the unfolded and extended position.

19. An aircraft medical unit as claimed in claim 1 further comprising adjustable lighting for positioning over the stretcher.

20. An aircraft medical unit as claimed in claim 3 further comprising a power unit.

21. An aircraft medical unit as claimed in claim 3 further comprising a power converter for converting aircraft power into a power source usable by the medical equipment.

22. An aircraft medical unit as claimed in claim 1 further comprising communication equipment to enable personnel at the medical unit to communicate within the aircraft and with land-based sources.

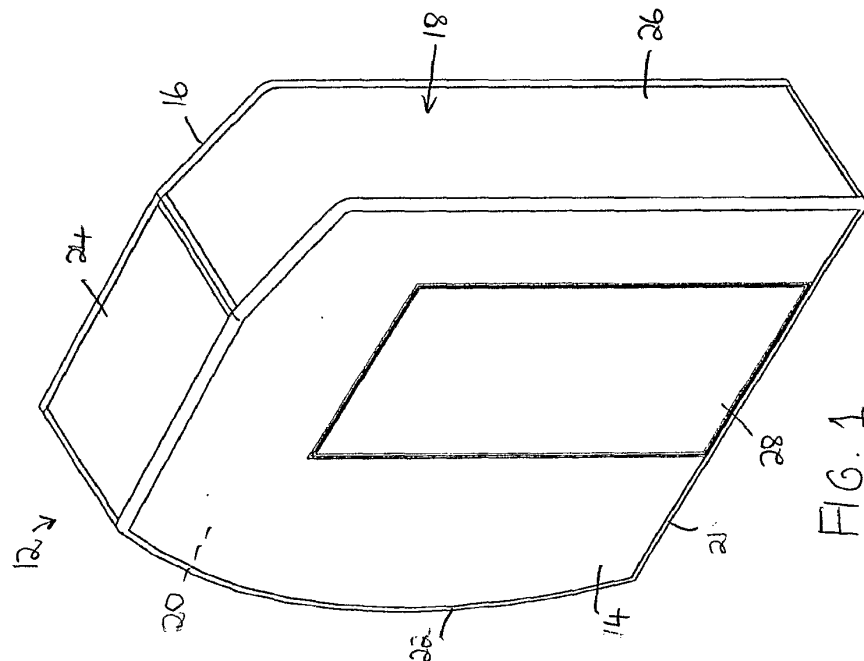
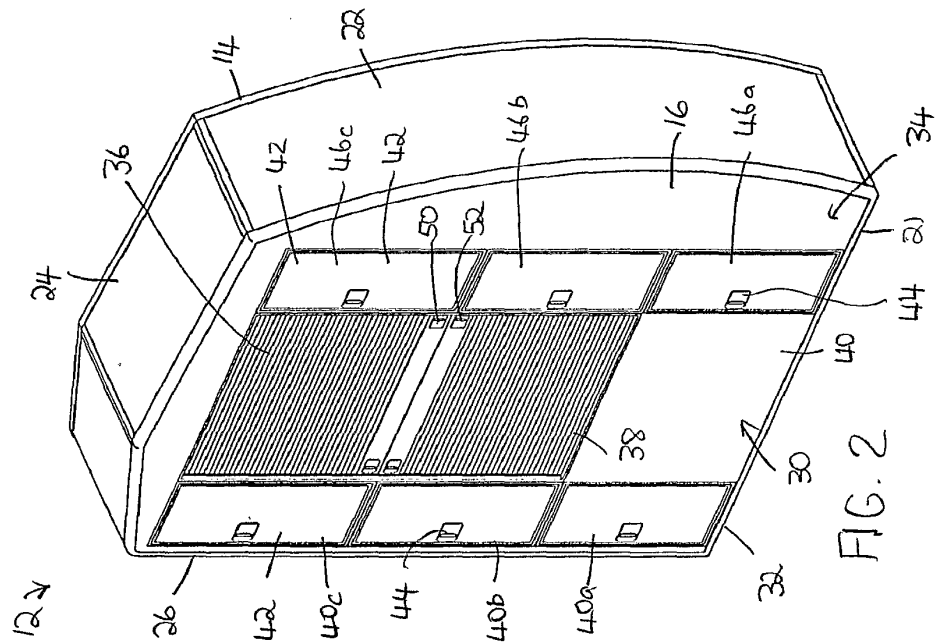
23. An aircraft medical unit as claimed in claim 1 wherein the stretcher frame is spring-mounted within the chamber to facilitate movement thereof between the folded and the stowed position on the one hand, and the unfolded and extended position on the other.

24. An aircraft medical unit as claimed in claim 3 further comprising at least one clamping member for attaching an item of medical equipment to the stretcher frame at a desired location.

25. An aircraft medical unit as claimed in claim 1 further comprising attachment members for securing the medical unit to tracks constructed in the cabin of the aircraft.

26. An aircraft medical unit as claimed in claim 1 further comprising an oxygen supply connector for connecting the medical unit to the oxygen supply within an aircraft.

27. An aircraft medical unit as claimed in claim 1 further comprising communication system connector for connecting to the communication system within the aircraft.



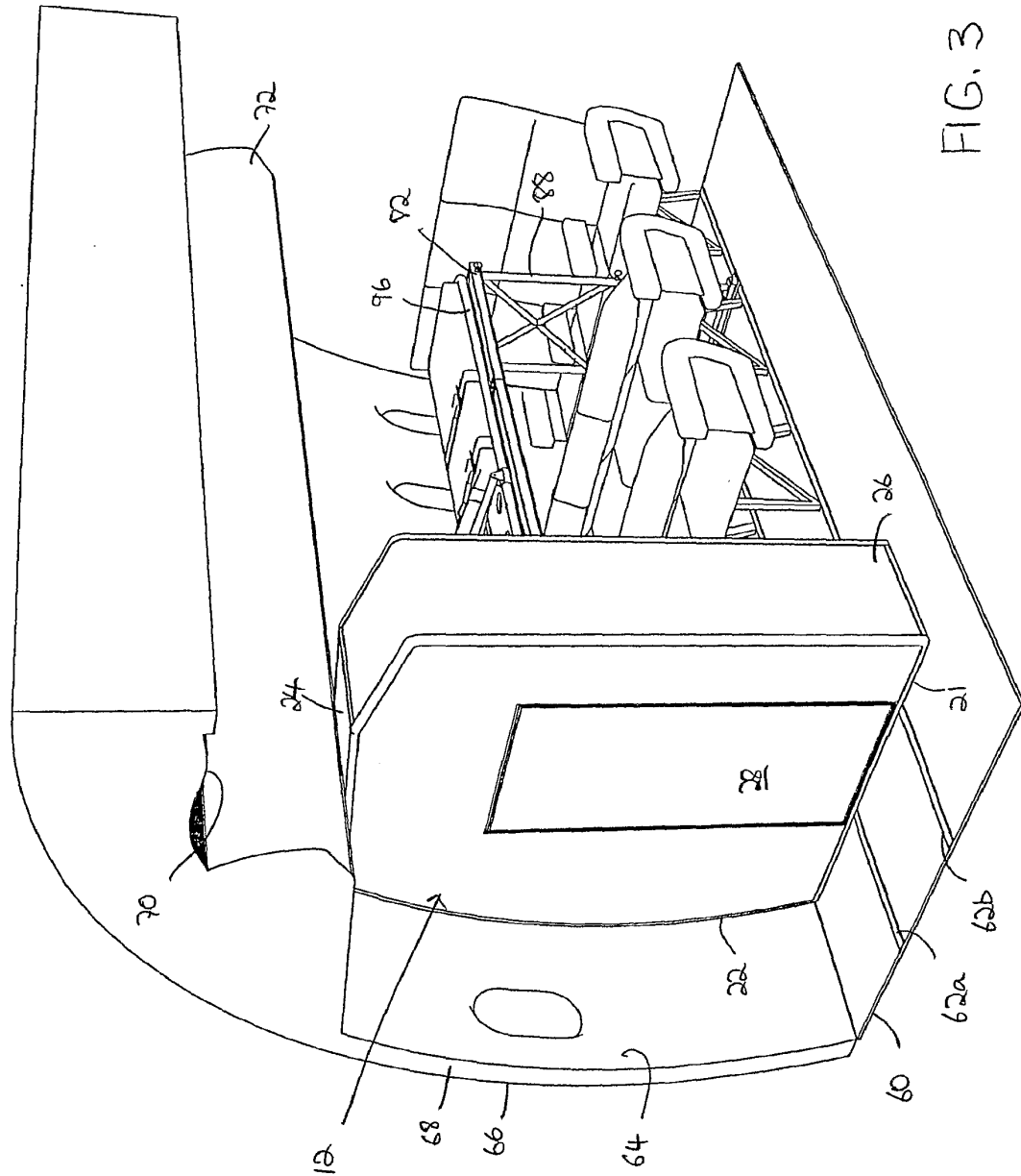
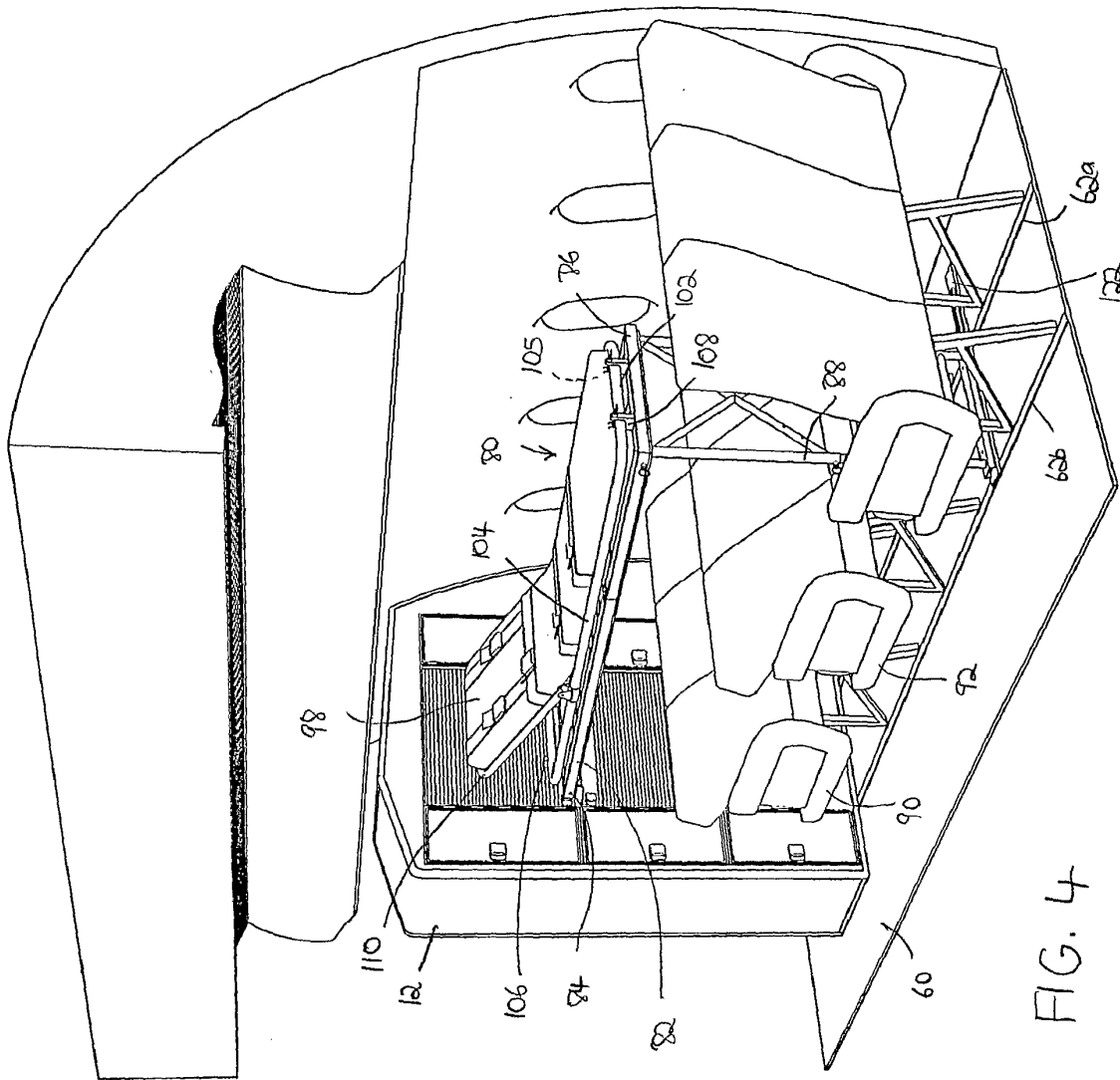
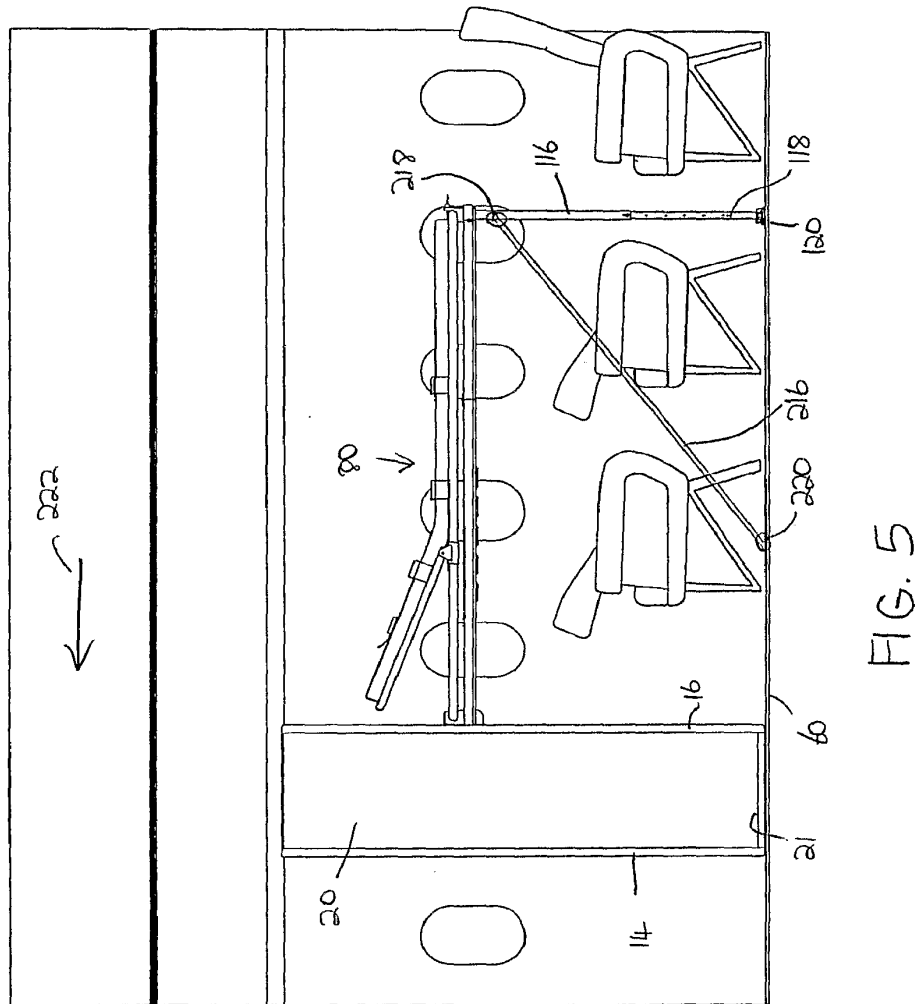
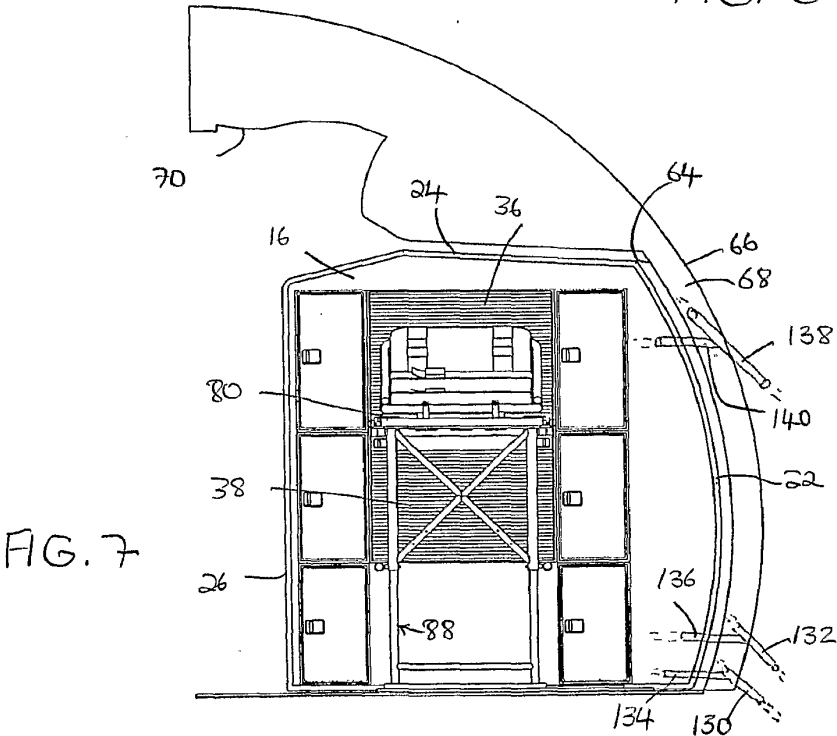
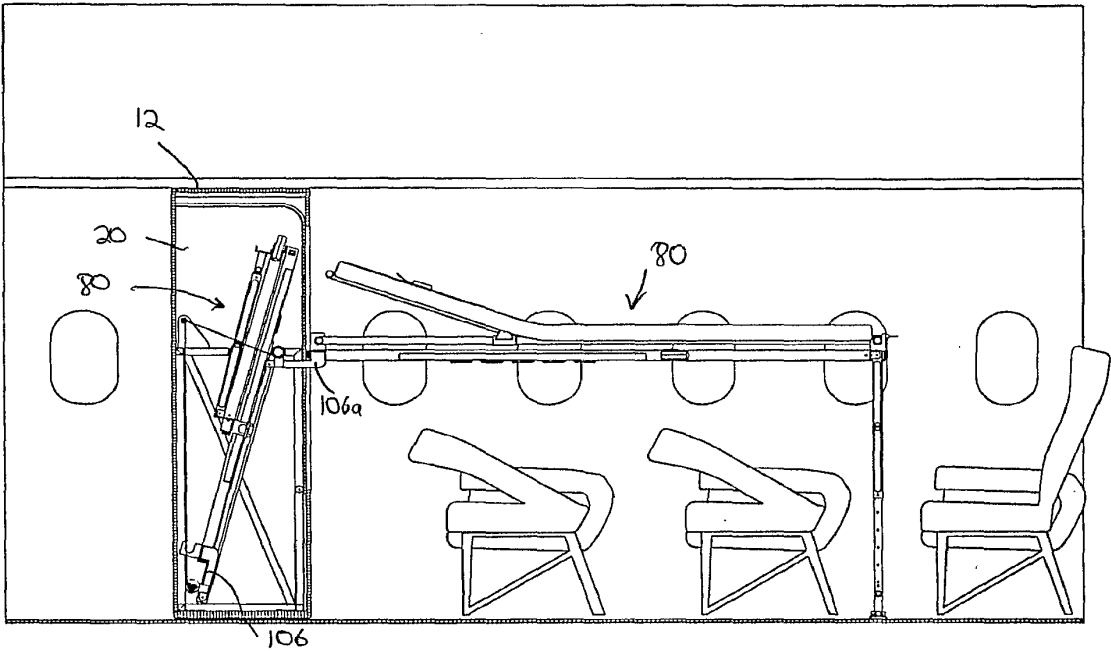
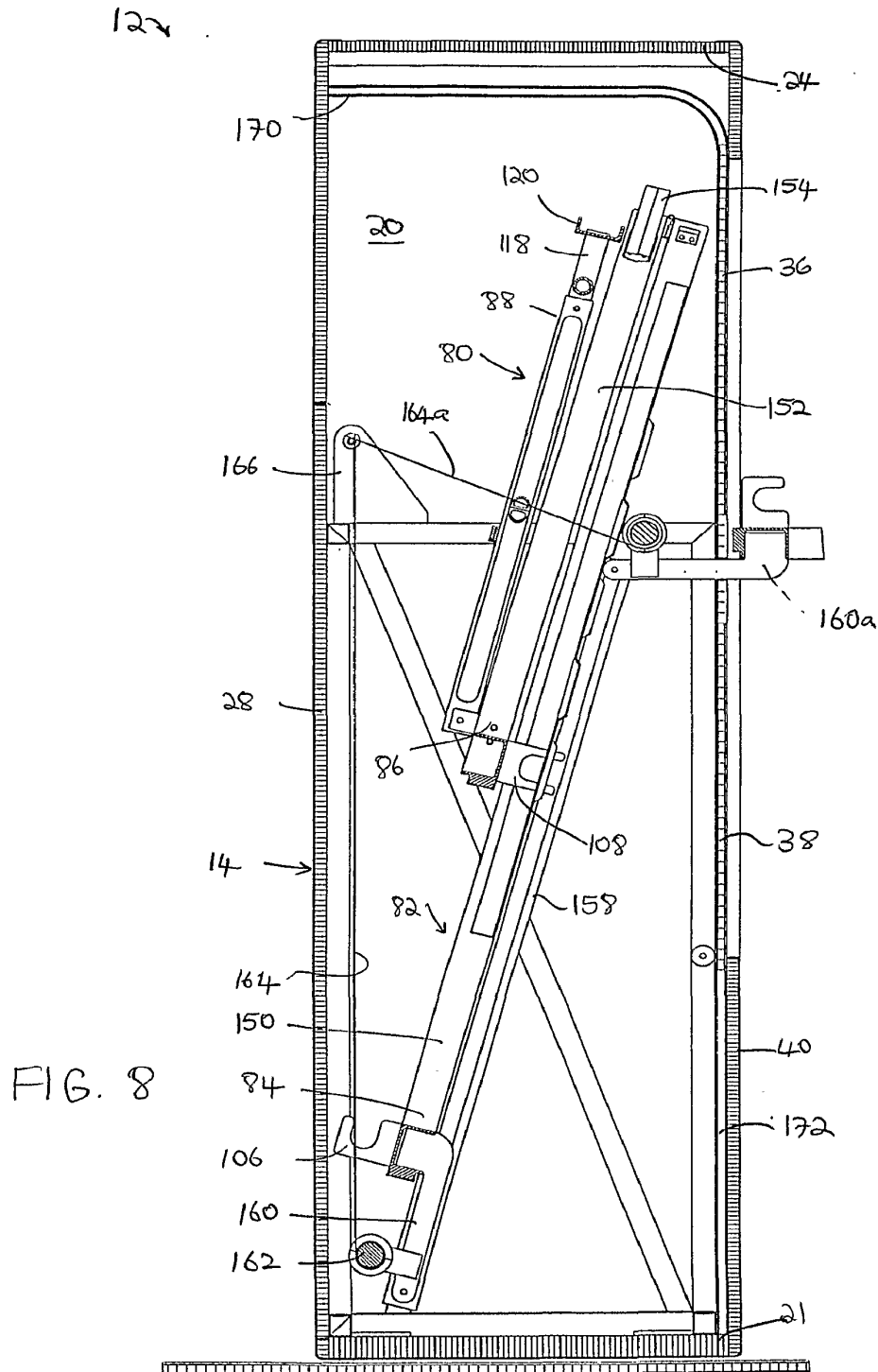


FIG. 3









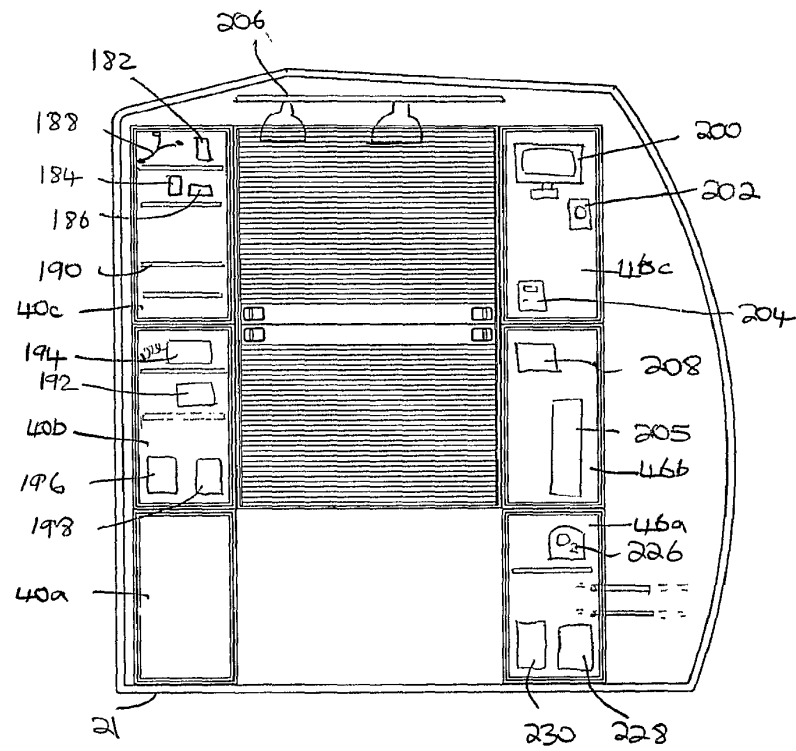


FIG. 9

PUB-NO: WO003026495A2
DOCUMENT-IDENTIFIER: WO 3026495 A2
TITLE: AIRCRAFT MEDICAL UNIT
PUBN-DATE: April 3, 2003

INVENTOR-INFORMATION:

NAME	COUNTRY
KEOGH, MARVIN	US

ASSIGNEE-INFORMATION:

NAME	COUNTRY
KEOGH MARVIN	US

APPL-NO: US00231932
APPL-DATE: September 26, 2002

PRIORITY-DATA: US32487101P (September 26, 2001)

INT-CL (IPC): A61B00/

EUR-CL (EPC): B64D011/00

ABSTRACT:

CHG DATE=20041005 STATUS=O>An aircraft medical unit comprises a front panel configured to fit in an aircraft cabin so as to form a divider inside the cabin and a spaced rear panel of substantially the same shape as that of the front panel. A side panel is constructed between the front and rear panels, and the front, rear and side panels defines a chamber. An access opening is formed in the front panel. A stretcher frame is provided and is movable between a folded and stowed position in the chamber and an unfolded and extended position to the outside of the chamber. The aircraft medical unit further includes at least one item of medical equipment used in the treatment of a patient.

ELECTRONIC FILING

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Don F. Cook et al.
Application No. : 14/043,500
Filing Date : 2013-10-01
For : AIRCRAFT INTERIOR LAVATORY
Examiner : Lee, Benjamin P.
Art Unit : 3641
Docket No. : BEALCI-91286
Confirmation No. : 1662
Date : December 22, 2014

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to the duty of disclosure and 37 C.F.R. § 1.97(b), enclosed is Form PTO/SB/08a listing art which may be material to patentability of the invention. Applicant respectfully does not admit that any of the items submitted herewith are effective as prior art under any section of 35 U.S.C. § 102 against the invention claimed. The fee associated with this filing will be paid by credit card with this electronic transmission.

The Commissioner is authorized to charge any additional fees or credit any overpayment in this matter to our Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /James W. Paul/
James W. Paul
Registration No. 29,967

6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696

Electronic Patent Application Fee Transmittal				
Application Number:		14043500		
Filing Date:		01-Oct-2013		
Title of Invention:		AIRCRAFT INTERIOR LAVATORY		
First Named Inventor/Applicant Name:		Don F. Cook		
Filer:		James Warren Paul/Adam Stocks		
Attorney Docket Number:		BEALCI-91286		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for Continued Examination	1801	1	1200	1200
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				1380

Electronic Acknowledgement Receipt	
EFS ID:	21031027
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Adam Stocks
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	22-DEC-2014
Filing Date:	01-OCT-2013
Time Stamp:	12:00:39
Application Type:	Utility under 35 USC 111(a)

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Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	613289	no	6
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Warnings:					
Information:					
3	Foreign Reference	EP1281614.pdf	671537	no	15
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4	Foreign Reference	WO03026495.pdf	1375132	no	27
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	
	Filing Date		2013-10-01	
	First Named Inventor	Don F. Cook		
	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

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	Filing Date		2013-10-01
	First Named Inventor	Don F. Cook	
	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Chinese Search Report, August 5, 2014, 1 pages, from Chinese application number 2011800202050	<input type="checkbox"/>

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	14043500
	Filing Date	2013-10-01
	First Named Inventor	Don F. Cook
	Art Unit	3641
	Examiner Name	LEE, BENJAMIN P
	Attorney Docket Number	BEALCI-91286

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JAMES W. PAUL/	Date (YYYY-MM-DD)	2015-02-06
Name/Print	James W. Paul	Registration Number	29,967

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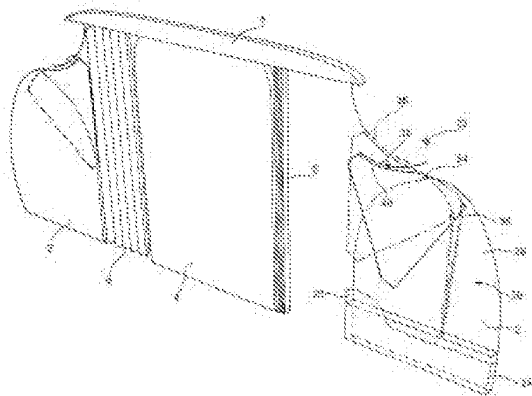
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Bibliographic data: WO2007006938 (A1) — 2007-01-18**AIRCRAFT CABIN PARTITION****Inventor(s):** BOCK THOMAS-MATHIAS [FR] ± (BOCK, THOMAS-MATHIAS)**Applicant(s):** AIRBUS [FR]; BOCK THOMAS-MATHIAS [FR] ± (AIRBUS, ; BOCK, THOMAS-MATHIAS)**Classification:** - international: **B64D11/00**
- cooperative: **B64D11/0023****Application number:** WO2006FR01634 20060707**Priority number (s):** FR20050007442 20050712**Also published as:** FR2888561 (A1) FR2888561 (B1) RU2008105036 (A)
RU2403186 (C2) JP2009501108 (A) more**Abstract of WO2007006938 (A1)**

The invention relates to a partition (2) for an aircraft cabin, comprising a rigid, fixed vertical panel (24, 26, 28); and an element (32) which can move between a deployed position, in which the element (32) projects out beyond the edges of the fixed, rigid panel (24, 26, 28), and a retracted position, in which the projecting part of the element (32) is retracted at least partially in relation to the edges of the fixed, rigid panel (24, 26, 28).



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(19) Organisation Mondiale de la Propriété
Intellectuelle
Bureau international



(43) Date de la publication internationale
18 janvier 2007 (18.01.2007)

PCT

(10) Numéro de publication internationale
WO 2007/006938 A1

(51) Classification internationale des brevets :
B64D 11/00 (2006.01)

(21) Numéro de la demande internationale :
PCT/FR2006/001634

(22) Date de dépôt international : 7 juillet 2006 (07.07.2006)

(25) Langue de dépôt : français

(26) Langue de publication : français

(30) Données relatives à la priorité :
0507442 12 juillet 2005 (12.07.2005) FR

(71) Déposant (pour tous les États désignés sauf US) : **AIRBUS** [FR/FR]; 1, Rond Point Maurice Bellonte, F-31700 Blagnac (FR).

(72) Inventeur; et

(75) Inventeur/Déposant (pour US seulement) : **BOCK, Thomas-Mathias** [FR/FR]; 29, Allée de Sébastopol, F-31330 Grenade-sur-Garonne (FR).

(74) Mandataire : **SANTARELLI**; Immeuble Innopolis A, B.P. 388, F-31314 Labège Cedex (FR).

(81) États désignés (sauf indication contraire, pour tout titre de protection nationale disponible) : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) États désignés (sauf indication contraire, pour tout titre de protection régionale disponible) : ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), eurasien (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), européen (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BI, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

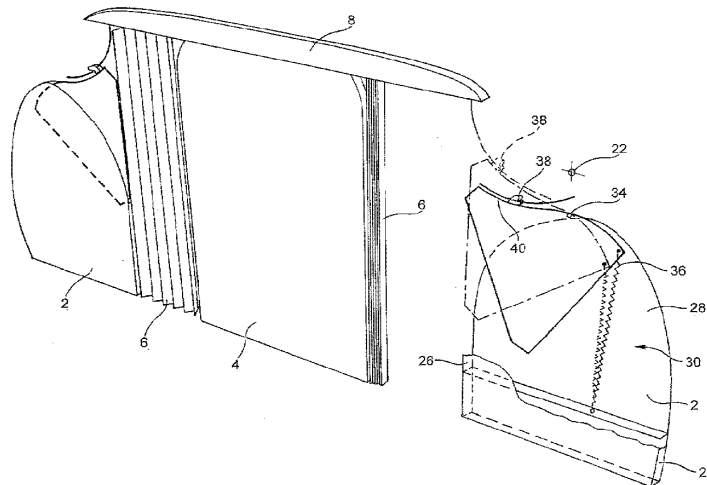
Publiée :

— avec rapport de recherche internationale

[Suite sur la page suivante]

(54) Title: AIRCRAFT CABIN PARTITION

(54) Titre : CLOISON DE SEPARATION DANS UNE CABINE D'AERONEF



(57) Abstract: The invention relates to a partition (2) for an aircraft cabin, comprising a rigid, fixed vertical panel (24, 26, 28); and an element (32) which can move between a deployed position, in which the element (32) projects out beyond the edges of the fixed, rigid panel (24, 26, 28), and a retracted position, in which the projecting part of the element (32) is retracted at least partially in relation to the edges of the fixed, rigid panel (24, 26, 28).

[Suite sur la page suivante]

WO 2007/006938 A1



— avant l'expiration du délai prévu pour la modification des revendications, sera republiée si des modifications sont reçues

abrégées" figurant au début de chaque numéro ordinaire de la Gazette du PCT.

En ce qui concerne les codes à deux lettres et autres abréviations, se référer aux "Notes explicatives relatives aux codes et

(57) Abrégé : Cette paroi de séparation (2) pour cabine d'aéronef comporte : un panneau vertical (24, 26, 28) rigide et fixe, un élément mobile (32) entre une position déployée dans laquelle l'élément mobile (32) fait saillie au-delà des contours du panneau (24, 26, 28) rigide et fixe et une position rétractée dans laquelle la partie en saillie de l'élément mobile (32) est escamotée au moins partiellement par rapport aux contours du panneau (24, 26, 28) rigide et fixe.

Cloison de séparation dans une cabine d'aéronef

La présente invention concerne une paroi de séparation dans une cabine d'aéronef.

Dans une cabine d'aéronef, on trouve parfois des sièges de types différents. Ces sièges différents permettent d'offrir aux passagers divers niveaux de confort dans la cabine de l'aéronef. Dans de telles cabines, on trouve alors généralement trois niveaux de confort définissant trois classes de confort croissant : la classe économique, la classe affaires et la première classe. Les sièges d'une même classe sont généralement regroupés au sein d'un compartiment.

De manière connue, les compartiments dans une cabine d'aéronef sont séparés les uns des autres par une cloison de séparation transversale. Ces cloisons doivent être réalisées en respectant les différentes règles de sécurité. Ainsi, il convient notamment de pouvoir évacuer rapidement l'aéronef en cas de danger. Les couloirs de la cabine de l'aéronef ne doivent donc pas comporter d'obstacles. Les cloisons de séparation de l'art antérieur comportent ainsi généralement des parois rigides présentant la largeur de deux ou trois sièges et disposées derrière une rangée transversale de sièges. Entre ces parois, au niveau du (ou des) couloir(s), un rideau, généralement textile, réalise la séparation entre les compartiments.

Avec une telle cloison de séparation, l'isolement entre les compartiments est imparfait. Ceci est dû en partie à l'utilisation de rideaux souples pour réaliser la séparation au niveau des couloirs mais également à la forme des parois rigides. En effet, pour permettre l'ouverture des coffres à bagages, placés en hauteur, la partie supérieure des parois rigides est découpée. Ainsi au cours d'un vol, lorsque les coffres à bagages sont fermés, une découpe apparaît dans la paroi de séparation au niveau de chaque coffre à bagages.

La présente invention a alors pour but de fournir une paroi (et une cloison) de séparation permettant de réaliser un bon isolement entre des compartiments de cabine d'aéronef, même au niveau de coffres à bagages.

A cet effet, elle propose une paroi de séparation pour cabine d'aéronef comportant un panneau vertical rigide et fixe.

Selon l'invention, cette paroi comporte en outre un élément mobile entre

une position déployée dans laquelle l'élément mobile fait saillie au-delà des contours du panneau rigide et fixe et une position rétractée dans laquelle la partie en saillie de l'élément mobile est escamotée au moins partiellement par rapport aux contours du panneau rigide et fixe.

Une telle paroi de séparation peut s'adapter à des contours "variables" tels ceux définis par un coffre à bagages qui peut être ouvert ou fermé. Ainsi, la position déployée de l'élément mobile correspond par exemple à la position fermée d'un coffre à bagages sous lequel se trouve la paroi de séparation et la position rétractée correspond à la position ouverte de ce coffre à bagages.

Dans une première forme de réalisation, l'élément mobile est monté pivotant autour d'un axe horizontal. Il s'agit ici d'un mouvement simple qui permet généralement de bien suivre le mouvement d'ouverture d'un coffre à bagages.

Une forme de réalisation préférée prévoit que l'élément mobile est une lame qui, dans sa position rétractée, est logée au moins partiellement dans une réservation prévue à cet effet dans le panneau rigide et fixe. Ainsi, esthétiquement, on ne voit apparaître que la partie en saillie de l'élément mobile. Dans cette forme préférée, le panneau rigide et fixe comporte par exemple deux faces latérales entre lesquelles vient prendre place la lame mobile, et le guidage de la lame mobile entre sa position déployée et sa position rétractée, et inversement, est assuré par les faces latérales du panneau rigide et fixe. Dans cette variante, la lame mobile est guidée comme une vitre de portière de véhicule automobile.

Pour commander le mouvement de l'élément mobile, il est proposé par exemple que des moyens de rappel précontraignent l'élément mobile vers sa position déployée. De cette manière, cet élément peut suivre le contour "variable". Dans le cas d'une paroi située sous un coffre à bagages, l'élément mobile peut suivre les ouvertures et fermetures de ce coffre.

Pour une meilleure liaison entre l'élément mobile et un coffre à bagages, l'élément mobile présente un bord supérieur sur lequel coulisse par exemple un butoir destiné à venir au contact d'une porte de coffre à bagages et fixé sur celle-ci.

La présente invention concerne également une cloison de séparation pour cabine d'aéronef comportant au moins une paroi de séparation et un rideau, dans laquelle au moins une paroi de séparation est une paroi telle que décrite ci-

dessus. Elle concerne également une cabine d'aéronef et un aéronef, caractérisés en ce qu'ils comportent chacun au moins une telle paroi de séparation.

Des détails et avantages de la présente invention ressortiront mieux de la description qui suit, faite en référence aux dessins schématiques annexés sur lesquels :

La figure 1 représente en perspective une cloison de séparation selon l'invention, et

La figure 2 est une vue partielle de face d'une cabine d'aéronef équipée d'une cloison de séparation selon l'invention.

La figure 1 représente une cloison de séparation destinée à prendre place dans une cabine d'aéronef. Cette cloison est destinée à être disposée transversalement dans cette cabine. Cette cloison de séparation comporte notamment deux parois de séparation latérale 2, une paroi de séparation centrale 4, deux rideaux 6 et un bandeau 8 supérieur. Tous ces éléments sont placés sensiblement dans un même plan que l'on supposera dans la suite de la description comme étant vertical.

Comme le montre la figure 2, cette cloison de séparation est destinée à isoler l'un de l'autre deux compartiments de la cabine d'aéronef. Dans l'exemple de la figure 2, la cloison de séparation est disposée entre un compartiment de classe affaires équipé de sièges convertibles 10 et un compartiment de classe économique équipé de sièges à dossier inclinable 12. La cloison de séparation s'étend depuis le sol 14 de la cabine d'aéronef jusqu'à son plafond et d'une paroi latérale 16 de cette cabine jusqu'à la paroi latérale opposée.

La paroi de séparation centrale 4 est une paroi fixe rigide. Elle correspond à une paroi de séparation telle celles que l'on connaît de l'art antérieur. Elle est disposée entre deux rangées de sièges successives. Dans la cabine d'aéronef considérée ici à titre d'exemple, deux couloirs 18 (dont seul un est représenté sur la figure 2) s'étendent longitudinalement dans la cabine de l'aéronef pour permettre l'accès aux sièges de cette cabine. La paroi de séparation centrale 4 est délimitée par ces deux couloirs 18. L'isolement entre les deux compartiments de la cabine d'aéronef séparés par la cloison de séparation représentée se fait au niveau des couloirs par les rideaux 6. On trouve ainsi un tel rideau 6 de part et d'autre de la paroi de séparation centrale 4. Sur la figure 1, un premier rideau 6 est montré dans sa position tirée dans laquelle il forme une

séparation entre les deux compartiments et un autre rideau est montré dans sa position pliée dans laquelle le rideau 6 laisse libre le passage entre les deux compartiments.

Le bandeau 8 est disposé au-dessus de la paroi de séparation centrale 4 et des rideaux 6. Ces derniers peuvent être par exemple portés par le bandeau 8. Une glissière peut ainsi être prévue aux extrémités de ce bandeau 8 sur la face inférieure de celui-ci.

Ce bandeau est par exemple un bandeau lumineux sur lequel peuvent apparaître des pictogrammes (non représentés). Ces pictogrammes peuvent par exemple indiquer aux passagers l'état libre ou occupé d'une toilette, rappeler éventuellement une interdiction de fumer, demander aux passagers d'attacher leur ceinture, etc....

La présente invention concerne plus particulièrement les parois de séparation latérales pour la configuration de cabine représentée aux dessins. Ces parois de séparation latérales 2 se trouvent disposées contre les parois latérales 16 de la cabine d'aéronef. Du côté opposé à cette paroi latérale 16 de cabine, elles sont délimitées par un couloir 18. Les parois de séparation latérales 2 représentées reposent sur le sol 14 de la cabine d'aéronef. En partie supérieure, ces parois de séparation latérales 2 s'étendent non pas jusqu'au plafond de la cabine d'aéronef mais jusqu'à un coffre à bagages 20. Dans l'exemple représenté, ce dernier est monté pivotant autour d'un axe horizontal longitudinal. Sur les figures, cet axe est symbolisé par un premier point de pivotement 22. Ce point correspond à l'intersection entre l'axe de pivotement horizontal et le plan vertical recevant la cloison de séparation.

Les deux parois de séparation latérales 2 de la figure 1 sont symétriques par rapport à un plan médian vertical de la cabine d'aéronef. Seule l'une de ces parois de séparation latérale 2 sera donc décrite ci-après.

Une paroi de séparation latérale 2, dans sa forme de réalisation préférée, comporte une base 24, une face avant 26 et une face arrière 28. La base 24 repose sur le sol 14 de la cabine d'aéronef. Les faces avant 26 et arrière 28 sont symétriques l'une par rapport à l'autre et définissent entre elles un logement 30. Ce dernier reçoit une lame mobile 32 (alors que la base 24 et les faces avant 26 et arrière 28 sont considérées comme étant fixes).

La forme des faces avant 26 et arrière 28 est telle que lorsque le coffre

à bagages 20 est en position ouverte un espace subsiste entre la partie supérieure des faces avant 26 et arrière 28 et le coffre à bagages 20 dans sa position ouverte. La lame mobile 32 vient combler l'ouverture restant entre les faces avant 26 et arrière 28 de la paroi de séparation latérale 2 et le coffre à bagages 20, que celui-ci soit en position fermée ou ouverte.

Dans la forme de réalisation préférée représentée aux dessins, la lame mobile 32 est montée pivotante autour d'un second axe horizontal, parallèle à l'axe de pivotement du coffre à bagages 20. On a représenté sur les figures 1 et 2 un second point de pivotement 34 qui correspond à l'intersection de l'axe de pivotement de la lame mobile 32 avec le plan contenant la cloison de séparation. Dans son mouvement de pivotement, la lame mobile 32 est guidée par les faces avant 26 et arrière 28.

Des moyens sont prévus pour précontraindre la lame mobile 32 dans sa position relevée, en contact avec le coffre à bagages 20. Dans la forme de réalisation représentée, ces moyens comportent un ressort 36 accroché d'une part à la lame mobile 32 et d'autre part à un point fixe, par exemple la base 24 de la paroi de séparation latérale 2, comme représenté sur la figure 1.

Dans la forme de réalisation préférée représentée au dessin, la lame mobile 32 ne vient pas directement au contact du coffre à bagages 20. Un butoir 38 fixé sous le coffre à bagages assure la liaison entre celui-ci et la lame mobile 32. On remarque sur les dessins que la lame mobile présente une arête supérieure 40 reprenant le contour de la face inférieure du coffre à bagages 20. Lorsque le coffre à bagages 20 s'ouvre, le butoir 38 vient glisser sur l'arête supérieure 40 de la lame mobile 32.

Sur la figure 2, la lame mobile 32 est représentée dans sa position déployée correspondant à la position fermée du coffre à bagages. Cette position déployée est représentée en pointillés sur la figure 1. Sur cette dernière figure, la lame mobile 32 est représentée dans sa position rétractée à l'intérieur du logement 30 en traits pleins. On remarque que la lame mobile 32 n'est que partiellement rétractée dans son logement 30. Dans une autre forme de réalisation, on pourrait prévoir que les faces avant 26 et arrière 28 de la paroi de séparation latérale 2 viennent sensiblement épouser la face inférieure du coffre à bagages 20 lorsque celui-ci est en position ouverte. Dans un tel cas de figure, la lame mobile, dans sa position rétractée, serait entièrement logée dans son

logement 30.

Comme on peut le voir sur les dessins, la lame mobile 32 permet de parfaire l'isolation entre deux compartiments d'une cabine d'aéronef. Une cloison de séparation telle que décrite ci-dessus permet de réaliser un bon isolement entre deux compartiments. Elle permet notamment d'avoir une isolation visuelle et phonétique des compartiments. On peut également prévoir des éclairages différents dans deux compartiments voisins séparés par la cloison de séparation selon l'invention.

La cloison de séparation selon l'invention permet de réaliser cet isolement aussi bien lorsque les coffres à bagages sont dans leur position ouverte que fermée.

En outre, la cloison de séparation selon l'invention permet de respecter les règles de sécurité et ne gêne pas notamment l'évacuation des passagers en cas d'urgence.

La présente invention ne se limite pas à la forme de réalisation préférée décrite ci-dessus à titre d'exemple non limitatif. Elle concerne également toutes les variantes de réalisation à la portée de l'homme du métier dans le cadre des revendications ci-après.

Une cloison de séparation selon l'invention peut s'adapter à tous types d'aéronefs. Elle concerne aussi bien des aéronefs monocouloir que des aéronefs comportant plusieurs couloirs. La description faite concerne l'isolement de deux compartiments de classes de confort différentes. Bien entendu, une telle cloison de séparation peut être utilisée pour réaliser deux compartiments d'une seule et même classe de confort ou par exemple pour isoler un compartiment destiné à recevoir des passagers et un autre compartiment destiné par exemple au personnel navigant (cuisine, etc...) ou tout autre type d'espace (espace médicalisé pour rapatriement sanitaire, etc...).

La description ci-dessus décrit un mode de réalisation préféré dans lequel la lame est montée pivotante. Dans cet exemple de réalisation, le mouvement de la lame mobile est adapté au mouvement que l'on rencontre le plus souvent au niveau de coffre à bagages. Il est clair que le mouvement de la lame mobile peut être différent de celui décrit. On peut par exemple prévoir une translation de cette lame dans le cas notamment où le coffre à bagages s'ouvre en se translatant. De même, la lame mobile décrite est guidée entre les faces avant

et faces arrière d'une paroi de séparation latérale. On pourrait prévoir une structure dans laquelle la lame mobile ne viendrait pas se loger entre deux faces d'une paroi mais viendrait simplement coulisser ou pivoter (ou tout autre mouvement) le long d'une paroi.

REVENDICATIONS

1. Paroi de séparation (2) pour cabine d'aéronef comportant :

- un panneau vertical (24, 26, 28) rigide et fixe, et
- un élément mobile (32) entre une position déployée dans laquelle l'élément mobile (32) fait saillie au-delà des contours du panneau (24, 26, 28) rigide et fixe et une position rétractée dans laquelle la partie en saillie de l'élément mobile (32) est escamotée au moins partiellement par rapport aux contours du panneau (24, 26, 28) rigide et fixe,

caractérisée en ce que l'élément mobile (32) présente un bord supérieur (40) sur lequel coulisse un butoir (38) destiné à assurer la liaison entre une porte de coffre à bagages (20) et l'élément mobile (32).

2. Paroi de séparation selon la revendication 1, caractérisée en ce que l'élément mobile (32) est monté pivotant autour d'un axe horizontal (34).

3. Paroi de séparation selon l'une des revendications 1 ou 2, caractérisée en ce que l'élément mobile (32) est une lame qui, dans sa position rétractée, est logée au moins partiellement dans une réservation (30) prévue à cet effet dans le panneau (24, 26, 28) rigide et fixe.

4. Paroi de séparation selon la revendication 3, caractérisée en ce que le panneau rigide et fixe comporte deux faces latérales (26, 28) entre lesquelles vient prendre place la lame mobile (32), et en ce que le guidage de la lame mobile (32) entre sa position déployée et sa position rétractée, et inversement, est assuré par les faces latérales (26, 28) du panneau rigide et fixe.

5. Paroi de séparation selon l'une des revendications 1 à 4, caractérisée en ce que des moyens de rappel (36) précontraignent l'élément mobile (32) vers sa position déployée.

6. Ensemble comportant d'une part un coffre à bagages avec une porte de coffre à bagages et d'autre part une paroi de séparation selon l'une des revendications 1 à 5, caractérisée en ce que le butoir (38) est fixé sur la porte du coffre à bagages (20).

7. Cloison de séparation pour cabine d'aéronef comportant au moins une paroi de séparation (2, 4) et un rideau (6), caractérisée en ce qu'au moins une paroi de séparation (2) est une paroi selon l'une des revendications 1 à 5.

8. Cabine d'aéronef, caractérisée en ce qu'elle comporte au moins une paroi de séparation (2) selon l'une des revendications 1 à 5.

9. Aéronef, caractérisé en ce qu'il comporte au moins une paroi de séparation (2) selon l'une des revendications 1 à 5.

10. Aéronef, caractérisé en ce qu'il comporte au moins un ensemble selon la revendication 6.

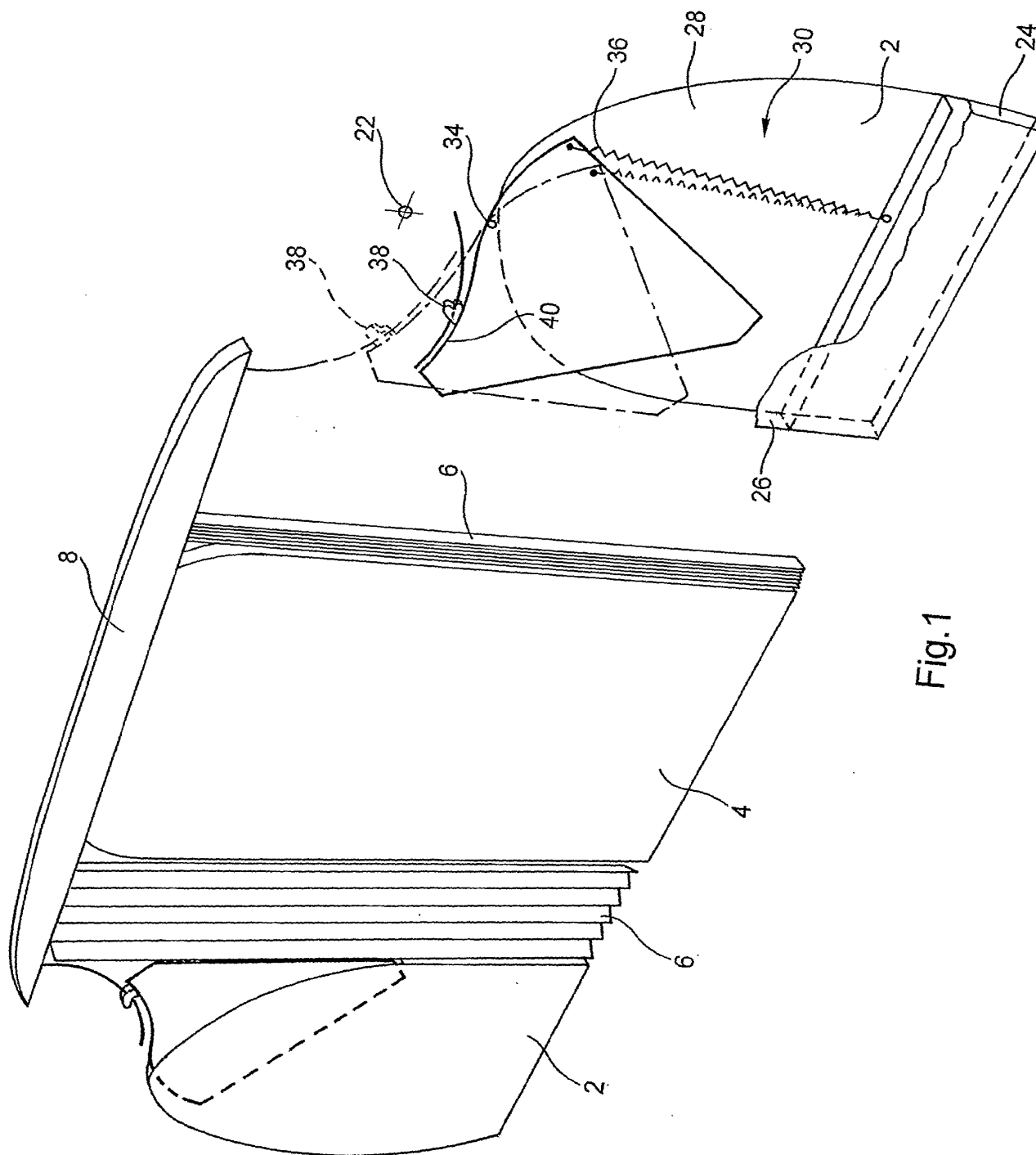


Fig.1

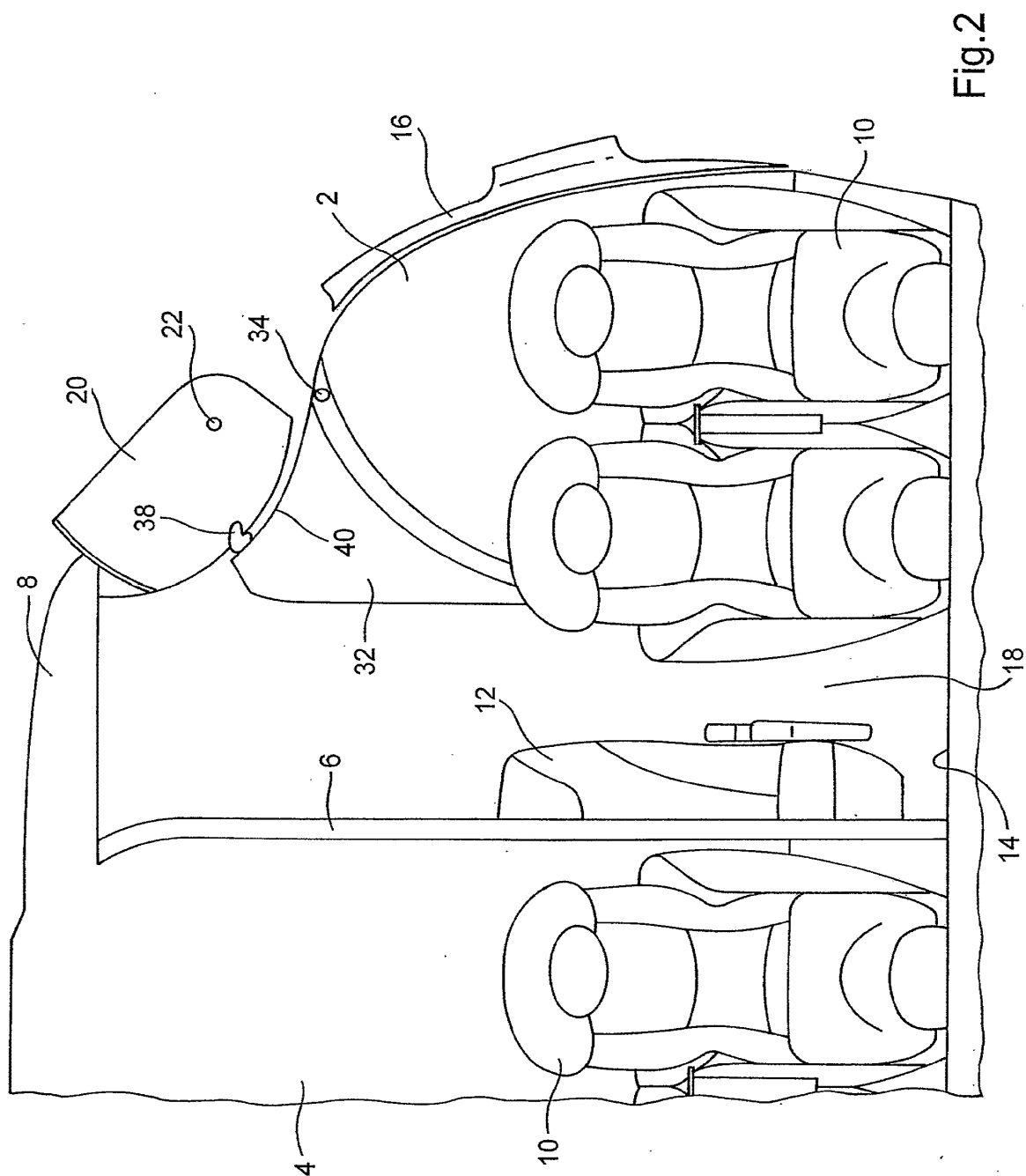


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No
PCT/FR2006/001634

A. CLASSIFICATION OF SUBJECT MATTER

INV. B64D11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B64D B64C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 911 219 A (DALRYMPLE ET AL) 27 March 1990 (1990-03-27) column 1, lines 6-25 column 4, line 24 - column 6, line 5 figures 2-4	1-10
A	US 6 523 779 B1 (MICHEL DOMINIQUE) 25 February 2003 (2003-02-25) column 4, lines 17-25 column 5, lines 4-65 figure 2	1-10



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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Date of the actual completion of the international search

21 November 2006

Date of mailing of the international search report

28/11/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
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Authorized officer

Weber, Carlos

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/FR2006/001634

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4911219	A	27-03-1990	NONE
US 6523779	B1	25-02-2003	DE 10080841 B4 06-05-2004
			DE 10080841 T0 13-06-2001
			WO 0056601 A1 28-09-2000
			FR 2791031 A1 22-09-2000
			GB 2353512 A 28-02-2001

Form PCT/ISA/210 (patent family annex) (April 2005)

RAPPORT DE RECHERCHE INTERNATIONALE

Demande internationale n°

PCT/FR2006/001634

A. CLASSEMENT DE L'OBJET DE LA DEMANDE
INV. B64D11/00

Selon la classification internationale des brevets (CIB) ou à la fois selon la classification nationale et la CIB

B. DOMAINES SUR LESQUELS LA RECHERCHE A PORTE

Documentation minimale consultée (système de classification suivi des symboles de classement)

B64D B64C

Documentation consultée autre que la documentation minimale dans la mesure où ces documents relèvent des domaines sur lesquels a porté la recherche

Base de données électronique consultée au cours de la recherche internationale (nom de la base de données, et si cela est réalisable, termes de recherche utilisés)

EPO-Internal

C. DOCUMENTS CONSIDERES COMME PERTINENTS

Catégorie*	Identification des documents cités, avec, le cas échéant, l'indication des passages pertinents	no. des revendications visées
A	US 4 911 219 A (DALRYMPLE ET AL) 27 mars 1990 (1990-03-27) colonne 1, ligne 6-25 colonne 4, ligne 24 - colonne 6, ligne 5 figures 2-4	1-10
A	US 6 523 779 B1 (MICHEL DOMINIQUE) 25 février 2003 (2003-02-25) colonne 4, ligne 17-25 colonne 5, ligne 4-65 figure 2	1-10



Voir la suite du cadre C pour la fin de la liste des documents



Les documents de familles de brevets sont indiqués en annexe

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- *Y* document particulièrement pertinent; l'invention revendiquée ne peut être considérée comme impliquant une activité inventive lorsque le document est associé à un ou plusieurs autres documents de même nature, cette combinaison étant évidente pour une personne du métier
- *G* document qui fait partie de la même famille de brevets

Date à laquelle la recherche internationale a été effectivement achevée

21 novembre 2006

Date d'expédition du présent rapport de recherche internationale

28/11/2006

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RAPPORT DE RECHERCHE INTERNATIONALE

Renseignements relatifs aux membres de familles de brevets

Demande internationale n°

PCT/FR2006/001634

Document brevet cité au rapport de recherche		Date de publication	Membre(s) de la famille de brevet(s)	Date de publication
US 4911219	A	27-03-1990	AUCUN	
US 6523779	B1	25-02-2003	DE 10080841 B4	06-05-2004
			DE 10080841 T0	13-06-2001
			WO 0056601 A1	28-09-2000
			FR 2791031 A1	22-09-2000
			GB 2353512 A	28-02-2001

Formulaire PCT/ISA/210 (annexe familles de brevets) (avril 2005)

Electronic Acknowledgement Receipt	
EFS ID:	21419415
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Adam Stocks
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	06-FEB-2015
Filing Date:	01-OCT-2013
Time Stamp:	10:15:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	612273 8f1375b6c8c0ae4a7b0599fe695e70dffdca61f	no	4

Warnings:

Information:

2	Foreign Reference	WO2007006938A1.pdf	812627	no	18
			a9bd7d5912d7f14f4d2cca8b4a929e7e9aba1a		
Warnings:					
Information:					
3	Non Patent Literature	NPL.pdf	41602	no	1
			393b194fee4f7d6c43148d8bee8020d0c948a09		
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<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662
24201 7590 02/20/2015 FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045			EXAMINER LEE, BENJAMIN P	
			ART UNIT 3641	PAPER NUMBER
			NOTIFICATION DATE 02/20/2015	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketla@fulpat.com
eOfficeAction@fulpat.com

Office Action Summary	Application No. 14/043,500	Applicant(s) COOK ET AL.	
	Examiner BENJAMIN P. LEE	Art Unit 3641	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 12/22/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 1-6,8 and 11-20 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-6,8 and 11-20 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date 12/22/2014, 2/6/2015

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.

4) ☐ Other: ____.

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/2014 has been entered.

Response to Arguments

2. Applicant's previously allowable claims have been examined on the merits with respect to the newly submitted prior art as per below. Upon further review, the indication of allowability is hereby withdrawn.

Information Disclosure Statement

3. The IDS documents submitted 12/22/2014 and 2/6/2015 are acknowledged and have been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
-
4. Claims 1-6, 8 and 11-20 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Betts et al. (U.S. Patent 3,738,497) in view of Breuer et al. (U.S. Patent 8,109,469) and in further view of Franke et al. (U.S. Patent 5,577,358).
 5. In regards to claim 1, Betts et al (henceforth referred to as Betts) disclose an aircraft enclosure for a cabin of an aircraft of a type that includes a forward-facing

passenger seat that includes an upwardly and aftwardly inclined seat back and an aft-extending seat support disposed below the seat back (see figure 1);

Betts fails to teach that the enclosure is a lavatory (Betts teaches a coat closet).

However, it is known in the art to include lavatory spaces onboard aircraft and further taught by Breuer et al (henceforth referred to as Breuer) to include recesses in/on the walls of aircraft lavatory enclosures (see configuration of Breuer lavatory in figure 1). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to provide any of various enclosures in the Betts teaching including a lavatory as taught by Breuer, to conserve space onboard the aircraft;

the lavatory comprising:

Betts as modified by Breuer teaches a lavatory unit including a forward wall portion and defining an interior lavatory space. See the configuration of the enclosure in Betts; said forward wall portion configured to be disposed proximate to and aft of the passenger seat and including an exterior surface having a shape that is substantially not flat in a vertical plane. The forward wall of the Betts enclosure is not completely flat in a vertical plane and is disposed proximate to and aft of a passenger seat back; and wherein said forward wall portion is shaped to substantially conform to the shape of the upwardly and aftwardly inclined seat back of the passenger seat and includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein. The wall portion as illustrated in Betts conforms to the shape of the seat back when the seat back is inclined. The wall includes a recessed portion that receives the seat back (see figures in Betts);

Betts fails to teach that the forward wall portion further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess. However, Franke et al (henceforth referred to as Franke) teaches a wall or partition with multiple recessed portions situated adjacent a passenger seat (see 33 and 34) and it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate multiple recessed areas in the wall of Betts as taught by Franke, to allow for various passenger or seat related components.

6. In regards to claim 2, Betts inherently discloses that said forward wall portion is configured to accept loads from the passenger seat back. The wall of Betts is capable of receiving loads from the seat (i.e. the seat leans on the wall etc.).

7. In regards to claim 3, Betts discloses that said forward wall portion further includes a projection configured to project over the passenger seat back when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess and at least a portion of the aft-extending seat support is received within the second recess. As illustrated, the recess in the wall of Betts includes a projection that is above and over the inclined seat (see figure 1).

8. In regards to claim 4, Betts discloses that the lavatory unit is taller than the passenger seat (see figures).

9. In regards to claim 5, Betts discloses that said forward wall portion includes a lower portion that is disposed under the passenger seat back when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess and at least a portion of the aft-extending seat support is received within the second recess. As illustrated, the wall of Betts includes a projecting lower portion that extends under the seat back.

10. In regards to claim 6, Betts discloses that said first recess in said forward wall portion is disposed between an upper wall portion and a lower wall portion (see figures).

11. In regards to claim 8, Betts discloses that said forward wall portion defines a secondary space in said interior lavatory space above the passenger seat back. As illustrated in Betts, the wall upper projection creates a space in the enclosure that is above the seat back.

12. In regards to claim 11, Betts discloses an aircraft enclosure for an aircraft, but not explicitly a lavatory for an aircraft. However, it is known in the art to include lavatory spaces onboard aircraft and further taught by Breuer et al (henceforth referred to as Breuer) to include recesses in/on the walls of aircraft lavatory enclosures (see

configuration of Breuer lavatory in figure 1). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to provide any of various enclosures in the Betts teaching including a lavatory as taught by Breuer, to conserve space onboard the aircraft;

the lavatory comprising:

- a forward partition. The enclosure includes a forward wall;
- an aft partition. The enclosure includes an aft wall;
- and a lavatory space disposed between the forward partition and the aft partition.

As modified by Breuer, Betts teaches a lavatory space between the walls; wherein the forward partition comprises: a forward-extending upper portion; an aft-extending mid-portion; and a forward-extending lower portion. The forward wall portion of the enclosure of Betts includes an upper projecting portion, a middle recessed portion and a lower projecting portion;

and wherein the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion combine to define a first aft-extending recess disposed between the upper forward-extending portion and the forward-extending lower portion (see Betts figure 1), and

Betts fails to teach that the forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein.

However, Franke et al (henceforth referred to as Franke) teaches a wall or

partition with multiple recessed portions situated adjacent a passenger seat (see 33 and 34) and it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to incorporate multiple recessed areas in the wall of Betts as taught by Franke, to allow for various passenger or seat related components.

13. In regards to claim 12, Betts discloses the first aft extending recess defined by the forward-extending upper portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition is configured to receive an aft-extending seat back of the forward-positioned passenger seat. The portions of the wall of Betts form a recess that receives a seat back of a passenger seat.

14. In regards to claim 13, Betts discloses that the aft partition is substantially vertical and substantially planar. Betts as modified teaches that one of walls of the enclosure is flat in a plane vertically (the aft wall opposite the passenger seat).

15. In regards to claim 14, Betts discloses the width of the lavatory space disposed between the forward partition and the aft partition comprises an upper width, a lower width, and a mid-width, and wherein the upper width and the lower width are both substantially wider than the mid-width. As configured, the space disclosed in Betts as modified teaches the claimed structure.

16. In regards to claim 15, Betts discloses that the upper forward-extending portion, the aft-extending mid-portion, and the forward-extending lower portion of the forward partition form a substantially continuous surface. The surface of the forward wall of Betts is substantially a continuous surface.

17. In regards to claim 16, Betts discloses said forward-extending upper portion is configured to project over at least a portion of the forward-positioned passenger seat. As illustrated in Betts, the extending portion is over the seat to some degree.

18. In regards to claim 17, Betts discloses said forward partition is configured to accept loads from the forward-positioned passenger seat. The partition of Betts is capable of accepting loads from the seat.

19. In regards to claim 18, Betts as modified discloses that said lavatory is taller than the forward-positioned passenger seat (see figures).

20. In regards to claim 19, Betts as modified discloses that said first aft-extending recess extends along substantially a full width of said forward partition. The recess extends from one side of the wall to the other.

21. In regards to claim 20, Betts discloses lavatory has a top, a bottom, a height therebetween, and a middle therebetween, said lavatory has varying lengths along the

height of the lavatory, and said lavatory is longer at the top of the lavatory than at the bottom of the lavatory. As configured, the lavatory meets the claim limitations.

Summary/Conclusion

22. Claims 1-6, 8 and 11-20 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Troy Chambers can be reached on 571-272-6874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/BENJAMIN P LEE/

Application/Control Number: 14/043,500

Page 11

Art Unit: 3641

Primary Examiner, Art Unit 3641

Receipt date: 12/22/2014

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14043500 - GAI: 3641

Approved for use through 07/31/2012. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500
	Filing Date		2013-10-01
	First Named Inventor	Don F. Cook	
	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	2650368	A	1953-09-01	EVANS RANDOLPH	
	2	3738497	A	1973-06-12	BETTS E et al.	
	3	5150863	A	1992-09-29	HOZUMI; HIROYUKI et al.	
	4	5333416	A	1994-08-02	HARRIS; EDWARD D. - ; SCHIMMELPFENNIG et al.	
	5	5340059	A	1994-08-23	Kanigowski	
	6	5482230	A	1996-01-09	BIRD MICHAEL S et al.	
	7	5529265	A	1996-06-25	SAKURAI BUNKICHI	
	8	6615421	B2	2003-09-09	Itakura	

Receipt date: 12/22/2014 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	14043500 - GAU: 3641
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	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

	9	7934679	B2	2011-05-03	Bock et al.	
	10	8096502	B2	2012-01-17	Bock et al.	
	11	8177163	B2	2012-05-15	Wilczynski et al.	

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	2	20110210205	A1	2011-09-01	BOCK et al.	
	3	20130206906	A1	2013-08-15	Burrows et al.	
	4	20140014774	A1	2014-01-16	Pozzi et al.	
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	Attorney Docket Number	BEALCI-91286		

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	1281614	EP	A1	2005-03-30	Farnsworth		<input type="checkbox"/>
	2	03026495	WO	A2	2003-04-03	KEOGH		<input type="checkbox"/>

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	1	MCDONNELL DOUGLAS, DC-10 Customer Configuration, October 1978, 177 pages	<input type="checkbox"/>
	2	C&D Zodiac, Inc.'s proposal to Scandinavian Airlines System to manufacture S4 Storage Unit, August 23, 2001, 17 pages	<input type="checkbox"/>
	3	C&D Zodiac, Inc.'s drawings with a leading page entitled "MD90," 27 pages	<input type="checkbox"/>
	4	Photographs of C&D Zodiac, Inc.'s S4 storage unit, 5 pages	<input type="checkbox"/>
	5	C&D Zodiac, Inc.'s Petition for Inter Partes Review of U.S. Patent No. 8,590,838 (including exhibits/tabs 1-9), May 2, 2014, 856 pages	<input type="checkbox"/>
	6	Technical Proposal by FSI to Air France regarding a Door 4 overhead crew rest station for the Boeing 747, August 3, 1994, 10 pages	<input type="checkbox"/>

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	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

	7	Rendering and photographs of Boeing 747 overhead crew rest station, 3 pages	<input type="checkbox"/>
	8	B/E Aerospace, Inc. Motion for Preliminary Injunction, May 16, 2014, 25 pages	<input type="checkbox"/>
	9	Greg Chamitoff Declaration in support of B/E Aerospace, Inc.'s Motion for Preliminary Injunction, May 14, 2014, 39 pages	<input type="checkbox"/>

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EXAMINER SIGNATURE

Examiner Signature	/Benjamin Lee/	Date Considered	02/11/2015
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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	Filing Date		2013-10-01
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	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JAMES W. PAUL/	Date (YYYY-MM-DD)	2014-12-22
Name/Print	James W. Paul	Registration Number	29,967

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Receipt date: 02/06/2015

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

14043500 - GAL: 3641

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	
	Filing Date		2013-10-01	
	First Named Inventor	Don F. Cook		
	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	20100059625	A1	2010-03-11	Saint-Jalms et al.			
	2	20100181425	A1	2010-07-22	Guering et al.			
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2007006938	WO	A1	2007-01-18	BOCK		<input type="checkbox"/>
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Receipt date: 02/06/2015 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500	14043500 - GAU: 3641
	Filing Date		2013-10-01	
	First Named Inventor	Don F. Cook		
	Art Unit	3641		
	Examiner Name	LEE, BENJAMIN P		
	Attorney Docket Number	BEALCI-91286		

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Chinese Search Report, August 5, 2014, 1 pages, from Chinese application number 2011800202050	<input type="checkbox"/>

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EXAMINER SIGNATURE

Examiner Signature	/Benjamin Lee/	Date Considered	02/11/2015
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

Receipt date: 02/06/2015 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500 14043500 - GAU: 3641
	Filing Date		2013-10-01
	First Named Inventor	Don F. Cook	
	Art Unit	3641	
	Examiner Name	LEE, BENJAMIN P	
	Attorney Docket Number	BEALCI-91286	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JAMES W. PAUL/	Date (YYYY-MM-DD)	2015-02-06
Name/Print	James W. Paul	Registration Number	29,967

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4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3258730

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
B/E AEROSPACE, INC.	12/16/2014
RECEIVING PARTY DATA	
Name:	JPMORGAN CHASE BANK, N.A.
Street Address:	270 PARK AVENUE
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10017
PROPERTY NUMBERS Total: 575	
Property Type	Number
Patent Number:	5476399
Patent Number:	5560681
Patent Number:	5560683
Patent Number:	5568960
Patent Number:	5574627
Patent Number:	5581441
Patent Number:	5605145
Patent Number:	5615928
Patent Number:	5636898
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Application Number:	11752491

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Application Number:	13849088
Application Number:	13849161
Application Number:	13849314
Application Number:	13849808
Application Number:	13850781
Application Number:	13851257
Application Number:	13851399
Application Number:	13852631
Application Number:	13852702
Application Number:	13852983
Application Number:	13853019
Application Number:	13853029
Application Number:	13853043
Application Number:	13859590
Application Number:	13862044
Application Number:	13898108
Application Number:	13901354
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Application Number:	13907197
Application Number:	13909195
Application Number:	13912627
Application Number:	13914315
Application Number:	13919799
Application Number:	13919839
Application Number:	13938707
Application Number:	13939487
Application Number:	13940012
Application Number:	13944547
Application Number:	13955370
Application Number:	13961715
Application Number:	13975211
Application Number:	14019252
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Application Number:	14041752

Property Type	Number
Application Number:	14043500
Application Number:	14044487
Application Number:	14060143
Application Number:	14070920
Application Number:	14073590
Application Number:	14089587
Application Number:	14090734
Application Number:	14091045
Application Number:	14143997
Application Number:	14168718
Application Number:	14175537
Application Number:	14175714
Application Number:	14178159
Application Number:	14185163
Application Number:	14198139
Application Number:	14207106
Application Number:	14213716
Application Number:	14225123
Application Number:	14230330
Application Number:	14242105
Application Number:	14245300
Application Number:	14245835
Application Number:	14245874
Application Number:	14247519
Application Number:	14247745
Application Number:	14247850
Application Number:	14262496
Application Number:	14270567
Application Number:	14272683
Application Number:	14301547
Application Number:	14301598
Application Number:	14302648
Application Number:	14302720
Application Number:	14303207
Application Number:	14303903
Application Number:	14304074
Application Number:	14321435
Application Number:	14327402

Property Type	Number
Application Number:	14333923
Application Number:	14338747
Application Number:	14449634
Application Number:	14451752
Application Number:	14463968
Application Number:	14464004
Application Number:	14464988
Application Number:	14465082
Application Number:	14467583
Application Number:	14502470
Application Number:	14502930
Application Number:	14507663
Application Number:	14517189
Application Number:	14518619
Application Number:	14519756
Application Number:	14519996
Application Number:	14520063
Application Number:	14527535
Application Number:	14528835
Application Number:	29343607
Application Number:	29361772
Application Number:	29388941
Application Number:	29469502
Application Number:	29485768
Application Number:	61236963
Application Number:	61286344
Application Number:	61845250
Application Number:	61893493
Application Number:	61902967
Application Number:	61909455
Application Number:	61909513
Application Number:	61915771
Application Number:	61918974
Application Number:	61919007
Application Number:	61945330
Application Number:	61945344
Application Number:	61954876
Application Number:	61955405

Property Type	Number
Application Number:	61969770
Application Number:	61970631
Application Number:	61972541
Application Number:	61973957
Application Number:	61974095
Application Number:	61974595
Application Number:	61975144
Application Number:	61976212
Application Number:	61976342
Application Number:	61983781
Application Number:	62011886
Application Number:	62022951
Application Number:	62023530
Application Number:	62036982
Application Number:	62054674
Application Number:	62079643
Application Number:	14083837
Application Number:	14086171
Application Number:	14224388
Patent Number:	5735578
Patent Number:	6047630
Patent Number:	7610804
Patent Number:	8201876

CORRESPONDENCE DATA

Fax Number:
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 312-732-2502
Email: lb.collateral.services@jpmchase.com
Correspondent Name: JP MORGAN CHASE BANK
Address Line 1: 10. STREET DEARBORN FLOOR L2
Address Line 2: WLO-IB COLLATERAL SERVICES
Address Line 4: CHICAGO, ILLINOIS 60603

NAME OF SUBMITTER:	CARLU FRANCESCHINI
SIGNATURE:	/CF/
DATE SIGNED:	03/10/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 30

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EXECUTION VERSION

Intellectual Property Security Agreement

This Intellectual Property Security Agreement (this "IP Security Agreement"), dated as of December 16, 2014 (the "Effective Date"), is made by B/E Aerospace, Inc., a Delaware corporation (the "Grantor") in favor of JPMorgan Chase Bank, N.A., as Collateral Agent, (the "Grantee").

WHEREAS, the Grantor, the Grantee and certain other parties have entered into that certain Pledge and Security Agreement, dated as of December 16, 2014 (as amended, modified or supplemented from time to time, the "Pledge and Security Agreement"). Capitalized terms used in this IP Security Agreement and not otherwise defined herein have the respective meanings assigned thereto in the Pledge and Security Agreement.

WHEREAS, under the terms of the Pledge and Security Agreement, the Grantor has granted to the Grantee, for the ratable benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the Grantor, and has agreed as a condition thereof to execute this IP Security Agreement for recording with the United States Patent and Trademark Office and the United States Copyright Office.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. Grant of Security. The Grantor hereby grants to the Grantee, for the ratable benefit of the Secured Parties, a security interest in the Grantor's right, title and interest in and to the following:

- (i) each of the United States patents and patent applications set forth on Schedule A hereto (the "Patents");
- (ii) each of the United States trademark registrations and trademark applications set forth on Schedule B hereto (the "Trademarks");
- (iii) each of the United States registered copyrights and copyright applications set forth on Schedule C hereto (the "Copyrights"); and
- (iv) any and all proceeds of the foregoing, including any claim by the Grantor against third parties for past, present or future infringement of any Patent, Trademark, or Copyright, or for injury to the goodwill associated with any Trademark.

SECTION 2. Recordation. The Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks record this IP Security Agreement.

SECTION 3. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the Pledge and Security Agreement. The rights and remedies of the Grantee with respect to the security interest granted herein are without prejudice to those set forth in the Pledge and Security Agreement. In the event that any provision of this Agreement is deemed to conflict with a provision in the Pledge

and Security Agreement, the provision of the Pledge and Security Agreement shall govern.

SECTION 4. Governing Law. This IP Security Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 5. Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have executed this IP Security Agreement as of the Effective Date.

B/E AEROSPACE, INC., as Grantor

By: 

Name: Joseph T. Lower

Title: Vice President and Chief Financial Officer

Signature Page to IP Security Agreement

JPMORGAN CHASE BANK, N.A.,
as Collateral Agent, as Grantee

By: Matthew H. Massie
Name: MATTHEW H. MASSIE
Title: MANAGING DIRECTOR

Signature Page -- B/E Aerospace Grant of Security Interests in Intellectual Property

Schedule A

PATENTS AND PATENT APPLICATIONS

Serial No. or <u>Patent No.</u>	<u>Date</u>	<u>Issue Title</u>	<u>Inventor</u>	<u>Country</u>	<u>Patent Holder</u>
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Schedule A to Grant of Security Interest in United States Patents and Trademarks

B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
5476399	High Frequency Low Temperature Electronic Socket Pin	12 19 95
5560681	Seat Bottom Extension Mechanism	10 01 96
5560683	Replaceable Seat Back Diaphragm	10 01 96
5568960	Aircraft Passenger Seat Swivel Assembly	10 29 96
5574627	Apparatus for Preventing the Formation of Condensation On Sub-Cooled Integrated Circuit Devices	11 12 96
5581441	Electrically-Operated Heat Exchanger Release Mechanism	12 03 97
5605145	Microphone Attenuating Device for Use in Oxygen Breathing System	2 25 97
5615928	Quick Replacement Bolster for Passenger Seat	4 01 97
5636898	Seat With Recline Linkage	6 10 97
5636901	Improved Aircraft Passenger Seat Frame with Torque Tube in Seat Back Portion	6 10 97
5651514	Recline Safety Lock Assembly	7 29 97
5653226	Device for Generating Oxygen	8 05 97
5687635	Opto Electronic Level Sensor	11 18 97
5707028	Cover Plate with Length Compensation	1 13 98
5727845	Armrest Arrangements in Convertible Aircraft Passenger Seating	3 17 98
5735578	Quick Replacement Seat Bottom Diaphragm	4 07 98
5775642	Convertible Passenger Seat Assembly	7 07 98
5783105	Oxygen Generating Compositions	7 21 98
5787562	Quick Replacement Seat Bottom Diaphragm	8 04 98
5795025	Retractable Armrest for Aircraft Seat	8 18 98
5800013	Vehicle Passenger Seating	9 01 98
5802863	System and Method for Refrigerating Liquids	9 08 98
5803062	Compression Molded Integrated Personal Service	9 08 98
5804146	Chemical Oxygen Generator	9 08 98
5816244	Modular Structural System for Personal Service and Oxygen Modules	10 06 98
5829431	Microphone Attenuation Device for Use in Oxygen Breathing Masks	11 03 98
5836547	Attenuated Seat Back Assembly for an Aircraft Passenger Seat	11 17 98
5868472	Aircraft Passenger Seat Frame	2 09 99
5871318	Quick Release Track Fastener	2 16 99
5882545	Oxygen Generating Compositions	3 16 99
5911595	Low profile angular connector device and method	6 15 99
5916535	Device for Generating Oxygen	6 29 99
5941245	Crew Oxygen Mask with Improved Comfort Control Apparatus	8 24 99
5954052	Safety Stowage Apparatus for Crew Oxygen Masks	9 21 99

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
5954401	Reclining Seat and Ottoman System for Aircraft Including Amenity Cabinet	9 21 99
5961442	Control Device for Admitting Pressure into Anti-G Pilot Pants	10 05 99
6007736	Oxygen Generating Compositions	12 28 99
6030583	Oxygen Generating Compositions	2 29 00
6037854	Thermal Fuse for Fluorescent Lamp	3 14 00
6047630	Integral Beverage Server Locking Apparatus NextGen Coffee Maker	4 11 00
6050175	Beverage Brewing Device Having an Integral Beverage Server Locking Apparatus	4 18 00
6054067	Low Temperature Sensitivity Oxygen Generating Compositions	4 25 00
6068455	Long Life Pump Assembly	5 30 00
6071329	Filter for Chemical Oxygen Generators	6 06 00
6089230	Aircraft Passenger Oxygen Delivery Unit Having Shiftable Oxygen Generating Candle	7 18 00
6102113	Temperature Control of Individual Tools in a Cluster Tool System	8 15 00
6109047	System and Method for Capacity Regulation of Refrigeration Systems	8 29 00
6113183	Privacy Shroud for Aircraft Seats	9 05 00
6123294	Airplane Barrier Net	9 26 00
6126854	Oxygen Generating Compositions	10 03 00
6143196	Oxygen Generating Formulation with High Structural Integrity	11 07 00
6161910	LED Reading Light	12 19 00
6182926	Aircraft Crew Rest Station for a Long Distance Airline Flight	2 06 01
6193907	Oxygen Generating Formulation with High Structural Integrity	2 27 01
6209334	System and Method for Capacity Regulation of Refrigeration Systems	4 03 01
6231816	Low Temperature Sensitivity Oxygen Generating Compositions	5 15 01
6244803	Airplane Cargo Barrier Net	6 12 01
6247531	Temperature Control of Individual Tools in a Cluster Tool System	6 19 01
6264896	Oxygen Generating Compositions	7 24 01
6279571	Emergency Breathing Apparatus	8 28 01
6282751	Hinge Connection for a Container of a Breathing	9 04 01
6295589	Filter for Chemical Oxygen Generators	10 02 01
6305644	Aircraft Cabin Seat Configuration	10 23 01
6305645	Aircraft Crew Rest Station for a Long Distance Airline Flight	10 23 01
6318364	Modular Drop Out Container for Aircraft Oxygen Masks	11 20 01
6336667	Latch Mechanism	1 08 02

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
6352309	Passenger Sleeper Seat	3 05 02
6352652	Low Temperature Sensitivity Oxygen Generating Compositions	3 05 02
6412864	Side Facing Multi-Passenger Divan Assembly	7 02 02
6416720	Emergency Oxygen Supply System for Passengers in Aircraft	7 09 02
6431516	Hot Cup Apparatus	8 13 02
6442767	Safety Helmet	9 03 02
6446446	Efficient Cooling System and Method	9 10 02
6464757	Filter for Chemical Oxygen Generators	10 15 02
6478256	Passenger Seat with Seat Back Breakover Assembly	11 12 02
6494536	Passenger Seat with Variable Length Seat Bottom	12 17 02
6499535	Temperature Control of Individual Tools in a Cluster Tool System	12 31 02
6520451	Aircraft Crew Rest Station for a Long Distance Airline Flight	2 18 03
6523539	Self Elongating Oxygen Hose for Stowable Aviation Crew Oxygen Mask	2 25 03
6526967	Crew Oxygen Mask Stowage Assembly	3 04 03
6550861	Passenger Seat Meal Tray	4 22 03
6567220	Aviation Crew Mask with Retinal Scan Instrument Display for Smoke in Cockpit Emergencies	5 20 03
6572304	Device for Fixing a First Part to a Second Part	6 03 03
6626649	Pump System Employing Liquid Filled Rotor	9 30 03
6641294	VEHICLE LIGHTING ASSEMBLY WITH STEPPED DIMMING	11 04 03
6644738	Aircraft Passenger Seat Frame Construction	11 11 03
6651660	Apparatus for Supplying Respiratory Gas to a Parachute Jumper	11 25 03
6651692	Module Oxygen Supply System	11 25 03
6669143	Non Encroaching Aircraft Passenger Seat	12 30 03
6669295	Passenger Seat with Low Profile Seat Back	12 30 03
6672661	Passenger Seat, Leg Module	1 06 04
6692069	Aircraft Sleeper Seat	2 17 04
6695406	Passenger Seat with Fabric Suspension Leg Rest	2 24 04
6742842	Passenger Seat with Privacy Shell	6 01 04
6749266	Locking Collar for Passenger Seat Back Recline	6 15 04
6769882	Pump Driven by Motor with Fluid Filled Rotor	8 03 04
6775996	Thermal Control Systems for Process Tools Requiring Operation Over Wide Temperature Ranges	3 04 08
6776455	Passenger Seat and Armrest Pivot Cover	8 17 04
6783080	Systems and Methods for Controlling Temperatures of Process Tools	8 31 04

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
6787782	Ultraviolet-Light Vehicle Air Cleaning System	9 07 04
6792875	Passenger Seat Meal Tray Assembly	9 21 04
6793282	Convertible Passenger Seat Assembly	9 21 04
6799805	Single Beam Aircraft passenger Seat	10 05 04
6802568	Segmented Beam Aircraft Passenger Seat	10 12 04
6805413	Quick Release Electrical Connector	10 26 04
6824213	Passenger Seat with Seat Electronics	11 30 04
6827026	Passenger Seat Meal Tray Assembly	12 07 04
6832504	Liquid Sensing System for an Aircraft Galley Cooler Using a Two Phase Working Fluid	12 21 04
6845627	Control System for an Aircraft Galley Cooler	1 25 05
6866794	Strontium Peroxide Catalyzed Oxygen Generating Compositions	3 15 05
6871665	Aircraft Oxygen Valve Having Knob with Distinctive Position Indicator	3 29 05
6880351	Liquid Galley Refrigeration System	4 19 05
6886559	Multi Phase Headset for Pilots	5 03 05
6899397	Aircraft Passenger Seat with Forward Arm Rest Pivot	5 31 05
6902365	Quick Release Track Fastener	6 07 05
6914219	Oven for an Aircraft, Having a DC Motor Driven Fan	7 05 05
6935593	Gas Distribution System in an Airplane	8 30 05
6955713	Device for Enriching Air With Oxygen	10 18 05
6960110	Secure Life Jacket Container	11 01 05
6990991	Safety Device for a Gas Distribution System in an Airplane and Method	1 31 06
6991447	Pleating Machine	1 31 06
6993918	Thermal Control Systems for Process Tools Requiring Operation Over Wide Temperature Ranges	2 07 06
7017408	Electro Optic Liquid Level Sensing System for Aircraft Beverage Brewing	3 28 06
7029215	Dual Track Fitting	4 18 06
7052171	LIGHTING ASSEMBLY WITH SWIVEL END CONNECTORS	5 30 06
7055904	Vehicle Seating Adapted for Sleeping Posture	6 06 06
7063386	Passenger Seat with Tilting Seat Bottom	6 20 06
7066551	Curved Beam Aircraft Passenger Seat	6 27 06
7077467	Cable Raceway	7 18 06
7083234	Vehicle Seating with Arcuate Motion Support	8 01 06
7111904	Vehicle Seating Supporting a Perch Position	9 26 06
7131698	Vehicle Passenger Seat with Adjustable Headrest	
7134729	Frame Assembly for Vehicle Passenger Seat	11 14 06

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
7135664	Method of adjusting multiple light sources to compensate for variation in light output that occurs with time	11 14 06
7137264	Liquid Galley Refrigeration System	11 21 06
7152426	Thermal Control Systems for Process Tools Requiring Operation Over Wide Temperature Ranges	12 26 06
7168828	Multicolor LED Vehicle Interior Light	1 30 07
7173383	Lighting apparatus having a plurality of independently controlled sources of different colors of light	2 06 07
7178353	Thermal Control System and Method (TDSF)	2 20 07
7178353	Apparatus Claims to Platen Concept	10 28 08
7178867	Secure Life Jacket Container	2 20 07
7188808	Aircraft Passenger Accommodation Unit with Deployable Bed	3 13 07
7191803	Elastic fabric with sinusoidally disposed wires	3 20 07
7195693	Lateral Temperature Equalizing System for Large Area Surfaces	3 27 07
7198387	An Aircraft Lighting System Utilizing Light Emitting Diodes	4 03 07
7201448	Headrest Support Assembly	4 10 07
7210740	A Reclining Chair Seat Articulator	5 01 07
7226131	Adjustable Seat Belt Guide Assembly	6 05 07
7231778	Cooling System for a Commercial Aircraft Galley	6 19 07
7240943	Independent Divan Door and Drawer Assembly	7 10 07
7243500	Heat Exchanger and Temperature Control Unit	7 17 07
7252340	Aircraft Passenger Seat with Forward Arm Rest Pivot	8 07 07
7252569	Secure Life Vest Container	8 07 07
7261378	CAM Lock for Vehicle Seating	8 28 07
7264647	Device for Enriching Air With Oxygen	9 04 07
7278421	Full Face Flexible Oxygen Mask for Use with Flight Helmets	10 09 07
7293458	Electro Optic Liquid Level Sensing System for Aircraft Beverage Brewing	11 13 07
7300112	Frame Assembly for Passenger Seat	11 27 07
7303234	Vehicle Seating with Arcuate Motion Support	12 04 07
7334758	Attachment Assembly for Mounting a Seat to the Floor of a Vehicle	2 26 08
7337625	Thermal Control Systems for Process Tools Requiring Operation Over Wide Temperature Ranges	3 04 08
7337810	Elastic fabric with sinusoidally disposed wires	3 04 08
7341309	Passenger Seating with Variable Length Seat Bottom	3 11 08
7360742	Aircraft Passenger Accommodation Unit with Deployable Bed	4 22 08

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
7393167	Load Limiting and Energy Dissipating Mounting for Vehicle Seating	7 01 08
7402790	Fiber optic security system for sensing the intrusion of secured locations	7 22 08
7407528	Method for Operating an Air Factorization Installation for Obtaining Oxygen on Board an Aircraft	8 05 08
7415835	Thermal Control System and Method (TDSF)	8 26 08
7419214	Lounge Seating Arrangement	9 02 08
7421849	Liquid Galley Refrigeration System	9 09 08
7427106	A Curved Profile Tracking Platform for a Passenger Seat	9 23 08
7431034	Oxygen Emergency Supply Means	10 07 08
7442238	Means for Air Factorization	10 28 08
7442275	Lateral Temperature Equalizing System for Large Area Surfaces	10 28 08
7458643	Aircraft Passenger Seat with Forward Arm Rest Pivot	12 02 08
7481216	Emergency Oxygen System for Aircraft Passengers	12 01 09
7487981	Seat Delivery Pallet	2 10 09
7500721	Seat Headrest	3 10 09
7503571	Seat Delivery Pallet	3 17 09
7506923	Adjustable Bi-Fold Table Tray	3 24 09
7506930	Passenger Seating with Variable Length Seat Bottom	3 24 09
7530631	Vehicle Seating with Storage Feature	5 12 09
7566154	LED Dome Light	7 28 09
7578470	Passenger Seating Arrangement	8 25 09
7578471	Aircraft Passenger Accommodation Unit with Deployable Bed	8 25 09
7588032	Oxygen Conservation System for Commercial Aircraft (PULSE)	9 15 09
7604019	Electronic Regulator with Primary and Back UP Modes for Passenger Oxygen	10 20 09
7607729	Inertia Lock Apparatus	10 27 09
7607732	One Piece Dress Cover for Aircraft Seat	10 27 09
7610804	Electro Optic Liquid Level Sensing System for Aircraft Beverage Brewing	11 03 09
7621593	Meal Tray with Advertising Display	11 24 09
7661459	Mobile Serving Cart and System Incorporating Same	2 16 10
7661460	Versatile and Efficient Three-Way Heat Exchangers for Fluid Media and Systems Employing Such Exchangers	2 16 10
7661848	Reading Light for Overhead Installation in Transport Vehicles	2 16 10

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
7694559	Electro Optic Liquid Level Sensing System for Aircraft Beverage Brewing	4 13 10
7721564	Wide Frequency Avionic Refrigeration System and Controller Therefore	5 25 10
7721797	Refrigerator-Oven Combination for an Aircraft Galley Food Service System	5 25 10
7721991	Translatable and Rotatable Passenger Seat	5 25 10
7735199	Aircraft Door Hinge Assembly	6 15 10
7738235	LED Lighting Apparatus	6 15 10
7748778	Inertia Lock Apparatus	7 06 10
7755027	Secure transmission cable having windings continuously laid in opposite directions	7 13 10
7765818	Refrigeration Unit and Diagnostic Method Therefore	8 03 10
7765820	Thermal Control System and Method (TDSF)	8 03 10
7770966	Convertible Passenger Seat Assembly	8 10 10
7782196	Entrance security system	8 24 10
7784463	Oxygen Conservation System for Commercial Aircraft (PULSE)	8 31 10
7784862	Tray Table Assembly	8 31 10
7789084	Method for Equipping A Personal Service Unit with Passenger Oxygen Masks	9 07 10
7789526	Quick Disconnect Lighting System	9 07 10
7793680	Electromechanical Regulator with Primary and Back Up Modes of Operation for Regulating Passenger Oxygen	9 14 10
7800047	Apparatus and method for a computerized fiber optic security system	9 21 10
7823967	HEATER SYSTEM FOR AN AIRCRAFT SEAT	11 02 10
7829825	Conversion Convection to Steam Oven	
7836886	Improved Breathing Mask and Regulator	11 23 10
7852213	Double-end fiber optic security system for sensing intrusions	12 14 10
7871317	Air Exit Guidance	1 16 11
7900870	Vent Door System with Lever Mechanism	2 27 13
7909480	Lighting Fixture	3 22 11
7950740	Seat Swivel with Brake for Infinite Rotational Position Adjustment	5 31 11
7954761	Modular Integrated Galley	6 07 11
7956316	Fiber optic security system for sensing the intrusion of secured locations	6 07 11
7959221	Leg Rest Extension Linkage	6 14 11
7971929	Meal Tray with Advertising Display	7 05 11
7988872	METHOD OF OPERATING A CAPACITIVELY COUPLED PLASMA REACTOR WITH DUAL TEMPERATURE CONTROL LOOPS	8 02 11

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B/E Aerospace, Inc. Issued U.S. Patents

ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
7992436	Electro-Optic Liquid Level Sensing System for Aircraft Beverage Brewing	8 09 11
7998250	Vortex Waste Separator	8 16 11
7998251	Vortex Waste Separator Apparatus	8 16 11
8002218	Combination Ventilation and Overhead Stowage Bin System	8 23 11
8002350	Convertible Passenger Seat Assembly	8 23 11
8012304	PLASMA REACTOR WITH A MULTIPLE ZONE THERMAL CONTROL FEED FORWARD CONTROL APPARATUS	9 06 11
8021521	METHOD FOR AGILE WORKPIECE TEMPERATURE CONTROL IN A PLASMA REACTOR USING A THERMAL MODEL	9 20 11
8025423	LED Lighting System for Retrofitting an Aircraft Cabin Fluorescent Lighting System	9 27 11
8028700	Full Face Flexible Oxygen Mask for Use with Flight Helmets	10 04 11
8034180	METHOD OF COOLING A WAFER SUPPORT AT A UNIFORM TEMPERATURE IN A CAPACITIVELY COUPLED PLASMA REACTOR	10 11 11
8038098	Overhead Luggage Bin for Aircraft Interior	10 18 11
8042819	Folding Cart for Galley	10 25 11
8042867	Seat Pan Drop Down Link	10 25 11
8042874	Insulating Cover for Flammable Cushioning Materials	10 25 11
8047583	Split Handle for Aircraft Door	11 01 11
8048460	Beverage Maker Flow Detection Logic	11 01 11
8056349	Method and Apparatus for Maintaining a Uniform Temperature in a Refrigeration System	11 15 11
8056857	Aircraft Seat with Upright Seat Back Position Indicator	11 15 11
8087611	Galley Unit with Cart Lift for Elevated Storage	1 03 12
8092638	CAPACITIVELY COUPLED PLASMA REACTOR HAVING A COOLED/HEATED WAFER SUPPORT WITH UNIFORM TEMPERATURE DISTRIBUTION	1 10 12
8092639	Plasma reactor with feed forward thermal control system using a thermal model for accommodating RF power changes or wafer temperature changes	1 10 12
8113573	Seat Articulation Mechanism	2 14 12
8122823	Space Saving in-Flight Trash Compactor	2 28 12
8127604	Liquid Level Sensor for Galley Inserts	3 06 12
8151582	Liquid Galley Refrigeration System	4 10 12
8151796	Inflatable Harness Crew Mask	4 10 12
8157951	Capacitively coupled plasma reactor having very agile wafer temperature control	4 17 12
8167244	Class Divider for Aircraft Cabin	5 01 12

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ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
8171749	Ultra Small Air Chiller for Aircraft Galley	5 08 12
8176917	Oxygen Conservation System for Commercial Aircraft (PULSE)	5 15 12
8201777	Aircraft Cargo Door and Method for Using the Same	6 19 12
8201876	Aircraft Seat with Single Actuator Seat Mechanism	6 19 12
8210175	Compact Passenger Oxygen Supply Device	7/3/2012
8210605	Holster for Portable IFE Device	7 03 12
8221580	Plasma reactor with wafer backside thermal loop, two-phase internal pedestal thermal loop and a control processor governing both loops	7 17 12
8240160	Temperature Control System with Advanced Temperature Transitioning Capabilities	8 14 12
8240604	Fire Proof, Bi Directional Decompression Panel	8 14 12
8245769	Refrigerator-Oven Combination for an Aircraft Galley Food Service System	8 21 12
8267558	Light Rotation Assembly	9 08 12
8272694	Articulating Passenger Seat	9 25 12
8289670	Adaptive Power Management System for Aircraft Galleys	10 16 12
8291525	Vacuum Waste System and Method for Using the Same	10 23 12
8291719	Thermal Control System and Method (Enhanced Post Condensing)	10 23 12
8302473	Electro-Optic Liquid Level Sensing System for Aircraft Beverage Brewing	11 06 12
8302604	Cockpit Oxygen Mask	11 06 12
8304699	Proximity Sensor	11 06 12
8305783	Systems and Methods for Polyphase Alternating Current Transformer Inrush Current Limiting	11 06 12
8329586	METHOD OF PROCESSING A WORKPIECE IN A PLASMA REACTOR USING FEED FORWARD THERMAL CONTROL	12 11 12
8337660	Capacitively coupled plasma reactor having very agile wafer temperature control	12 25 12
8360516	Aircraft Seat with Single Actuator Seat Mechanism	1 29 13
8376306	Anti-Rattle Track Fastener	2 19 13
8376458	Seat Pan CAM Follower with Drop Down Mechanism	2 19 13
8378595	An Aircraft LED Wash light System and Method for Controlling Same	2 19 13
8387618	Oxygen Emergency Supply Device	3 05 13
8397723	EMERGENCY OXYGEN SUPPLY DEVICE	3 19 13
8403415	Passenger Seat Recline Mechanism	3 26 13
8414076	Passenger Seating Arrangement	4 09 13

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ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
8444225	Deployable Legrest	5 21 13
8453468	System and Method for Thermal Control from a Single Source of Different Heat Loads	6 04 13
8476844	LED Lighting System	7 02 13
8485703	Aircraft Cabin Lighting System and Kit	7 16 13
8490543	Space Saving In-Flight Trash Compactor	7 23 13
8495887	Liquid Galley Refrigeration System	7 30 13
8496005	Improved Breathing Mask and Regulator	7 30 13
8514076	(SmartGrate-Plus) Entrance Security System	8 20 13
8516832	Control System for a Food & Beverage Compartment Thermoelectric Cooling System	8 27 13
8528555	Device for Generating Oxygen	9 10 13
8528860	Tool Less Track Fastener	9 10 13
8528968	Stowable Passenger Seat Tray Table	9 10 13
8532832	Method and Apparatus for Thermal Exchange with Two-Phase Media	9 10 13
8534759	Passenger Seat Armrest Recline Mechanism	9 17 13
8534761	Armrest Assembly for Aircraft Passenger Seat	9 17 13
8540310	In-seat Beverage Holder	9 24 13
8544796	Passenger Seat Assembly with Associated Floor Panel and Aircraft Sidewall Attachment	10 01 13
8546267	METHOD OF PROCESSING A WORKPIECE IN A PLASMA REACTOR USING MULTIPLE ZONE FEED FORWARD THERMAL CONTROL	10 01 13
8578959	Rinse Valve for Vacuum Waste System	11 12 13
8590838	Aircraft Interior Lavatory (Spacewall)	11 26 13
8607370	Flush Valve for and Vacuum Generator for Vacuum Waste System	12 17 13
8607586	Aircraft Galley Refrigeration System with Multi Circuit Heat Exchanger	12 17 13
8608900	Plasma reactor with feed forward thermal control system using a thermal model for accommodating RF power changes or water temperature changes	12 17 13
8635995	Oven Having a Uniform Hot Air Flow in the Preparation Space	1 28 14
8643211	Modular Passenger Service Units	2 04 14
8662447	Flexible-Usage Travel Suite	3 04 14
8665119	Electrically Activated Latch for Aircraft Stowage Bins	3 04 14
8665584	Tablet Holder & Tablet Stowage System	3 04 14
8676530	Adaptive Power Management System for Aircraft Galleys	11 05 13
8689575	Thermal Control System and Method (Enhanced Post Condensing)	4 08 14
8689790	Oxygen Conservation System for Commercial Aircraft (PULSE)	4 08 14
8692487	Aircraft Cabin Lighting System and Kit	4 08 14

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ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
8695136	Distributed Flotation Foam for Aircraft Bottom Cushions	4 15 14
9696065	Aircraft Seat with Pneumatically Actuated Tilting Headrest	4 15 14
8701752	Refrigerator-Oven Combination for an Aircraft Galley Food Service System	4 22 14
8707864	Integrated Vehicle Galley Trash Compactor	4 29 14
8727686	Improved Method of Attaching Aircraft Monuments to an Aircraft at Floor Level Using a Multi Position Rail (EDISON)	5 20 14
8741221	Chemical Oxygen Generator with Chemical Cores Arranged in Parallel	6 03 14
8746735	Retractable Shoulder Harness with an Airbag	6 10 14
8776880	Modular Apparatus and Method for Compacting Trash	7 15 14
8782835	Snap on bottom cushion for Aircraft seats	7 22 14
8783771	Aircraft Seat with Extendable Seat Pan	7 22 14
8794162	Foldable Passenger Table	8 05 14
8801893	METHOD OF COOLING A WAFER SUPPORT AT A UNIFORM TEMPERATURE IN A CAPACITIVELY COUPLED PLASMA REACTOR	8 12 14
8807481	Aircraft Seating Arrangement & Seat	8 19 14
8813513	Liquid Galley Refrigeration System	8 26 14
8839631	Thermoelectric Cooling System for Beverage & Food Compartment	9 23 14
8851565	Computer Tablet Holder	10 07 14
8857315	Espresso Maker Pressure Relief System	10 14 14
8880685	GAIN to GAIN Network for Aircraft Galley System	11 04 14
D443,990	Aircraft Seat Assembly	6 26 01
D486,330	Seat Armrest Unit	2 10 04
D487,856	Seat Back Meal Tray	3 30 04
D495171	Arm Rest End Cap	8 31 04
D498197	Seat Back Cup Holder	9 21 04
D505264	Stitching Pattern Applied to Seat Backs	5 24 05
D505796	Passenger Seat	6 07 05
D506892	Stitching Pattern Applied to Seat Backs	7 05 05
D510825	Stitching Pattern Applied to Seat Backs	10 25 05
D570297	Information Panel	6 03 08
D575890	Flex Mounted Reading Light	8 26 08
D578240	Sconce Lighting Fixture	10 07 08
D578241	Sconce Lighting Fixture	10 07 08
D579601	Wall Mounted Lighting Fixture	10 28 08
D581575	Reading Light	11 25 08
D581576	Overhead Reading Light	11 25 08
D611260	Passenger Seating Arrangement	3 09 10

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ISSUED PATENT NO.	DESCRIPTION	PATENT ISSUE DATE
D613516	Passenger Seat	4 13 10
D618775	Vacuum Waste System	6 29 10
D619227	Bowl for Vacuum Waste System	7 06 10
D619228	Vacuum Waste Bowl	7 06 10
D622988	Seat Control Interface	9 07 10
D639754	Appliance Control Panel	6 14 11
D651843	Beverage Maker Appliance	1 10 12
D652,676	Galley Appliance	1 24 12
D652243	Beverage Maker Appliance	1 17 12
D652244	Beverage Dispenser Appliance	1 17 12
D652245	Water Dispenser Appliance	1 17 12
D652253	Bun Warmer Appliance	1 17 12
D653098	Door Latch	1 31 12
D658967	Door Latch	5 08 12
D711305	Aircraft Galley (EDISON)	8 19 14

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Passenger Oxygen Mask	11/031788	1 07 05
Passenger Oxygen Mask	11/099109	4 05 05
Aircraft Oxygen Supply Unit	11/752491	5 22 07
Folding Cart for Galley	11/950838	12 05 08
Automatic Switching Valve	12/016296	1 18 08
Improved System for Regulating the Dispensing of Passenger Oxygen Supply	12/144527	6 23 08
Pilot Mask with Integrated Respiratory Air Sensor	12/167447	3 07 08
Aircraft Galley Refrigeration System including a Reduced Weight and Depth Storage Compartment Cooling Apparatus	12/478923	6 05 09
Modular Galley Unit Including Beverage Maker	12/524345	7 23 09
Beverage Maker Flow Detection Logic	12/533847	7 31 09
Galley Refrigerator Connected to Aircraft Supplemental Cooling System	12/566024	9 24 09
Method and Apparatus for Maintaining a Uniform Temperature in a Refrigeration System	12/617950	11 13 09
Wall Mounted Chiller for Aircraft Galley Cart Compartment	12/716397	3 03 10
Oven with External Cooling	12/755207	4 06 10
Video Bezel Seat Attachment	12/776638	5 10 10
PLASMA REACTOR WITH A MULTIPLE ZONE THERMAL CONTROL FEED FORWARD CONTROL APPARATUS	12/855,670	8 12 10
CAPACITIVELY COUPLED PLASMA REACTOR HAVING A COOLED/HEATED WAFER SUPPORT WITH UNIFORM TEMPERATURE DISTRIBUTION	12/855,675	8 12 10
Calibration Method for Led Lighting Systems	13/036329	2 25 11
LED Lighting Element	13/036626	2 25 11
METHOD AND DEVICE FOR CONTROLLING THE PRESSURE AND / OR FLOW RATE OF FLUID	13/057225	7 30 09
Passenger Seat Assembly and Associated Floor Panel Structure	13/069474	3 23 11
Aircraft Bin Module with integrated Air Ducts & Lighting	13/089114	4 18 11
Aircraft Ceiling Module with integrated Lighting, Valences & Wiring	13/089229	4 18 11
Lift Assist Mechanism	13/089248	4 18 11
Use of Aircraft Cabin Surfaces to Guide Airflow and Sound	13/089261	4 18 11
Beverage Warmer and Cooler for Aircraft Passenger Seats	13/115210	5 25 11
Temperature Control System and Method - TDSF Plus	13/181753	7 13 11
Working Area in an Aircraft	13/208289	8 11 11

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Vehicle Refrigerator Having a Liquid Line Subcooled Vapor Cycle System	13/215456	8 23 11
Aircraft Galley Liquid Cooling System	13/215555	8 23 11
Anti-freezing Device for Aircraft Fill and Drain Connections	13/234895	9 16 11
Complete Integrated Aircraft Interior	13/239294	9 21 11
Apparatus and Method for Compacting Trash	13/239639	9 22 11
Vehicle Galley (A350XWB)	13/241747	9 23 11
Aircraft Galley Door Hinge	13/333005	12 21 11
Integrated Power Source & Control Board (IPSC)	13/335544	12 22 11
Low Profile Swivel Seat for an Aircraft	13/335980	12 23 11
Mountable Cork Puller	13/410710	3 02 12
Seat-Plinth Attachment System	13/419645	3 14 12
Brew Chamber Packet Ejector	13/424624	3 20 12
Non-contact multi-revolution encoder system for use on aircraft seating actuators	13/430808	3 27 12
Aircraft Galley (Galileo)	13/432965	3 28 12
Process for Defining an Optimized Seat Support Membrane	13/437440	4 02 12
Passenger Oxygen Mask	13/453058	4 23 12
On-board Generation of Oxygen for Aircraft Passengers	13/481057	5 25 12
On-board Generation of Oxygen for Aircraft Pilots	13/481095	5 25 12
Chemical Oxygen Generator with Parallel Chemical Cores (Hybrid On-board Generation)	13/483345	5 30 12
Vehicle LED Reading Light Grouping System & Method	13/486789	6 01 12
Aircraft Lavatory Emergency Oxygen Device	13/528414	6 20 12
Lavatory Chemical Oxygen with Remotely located Oxygen Generation	13/533558	6 26 12
Advanced Crewmember Protective Breathing Equipment	13/546115	7 11 12
An Aircraft LED Wash light System and Method for Controlling Same	13/546475	7 11 12
Aircraft Interior Lavatory (Spacewall)	13/551397	7 17 12
Light Weight Meal Carrier Cart	13/554172	7 20 12
Thermal Actuator	13/566954	8 12 12
Composite Panel Insert	13/567267	8 16 12
Articulating Door for Aircraft Lavatory	13/568083	8 17 12
Cockpit Oxygen Mask	13/568667	8 30 12
Interchangeable chilled air outlet for aircraft galley chiller	13/599840	8 30 12
Integrated Cabin Crew Changing Area	13/606740	9 07 12
Aircraft Galley Stowage Compartment Extractor	13/606806	9 07 12
Aircraft Waste Bin Extractor	13/606832	9 07 12
Mask-Snap Connection	13/630423	9 28 12

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Method for Color Mixing & Calibration Using LEDs	13/650289	10 12 12
(SmartGate-Plus) Entrance Security System (CIP)	13/653704	10 17 12
Heat Shield	13/659005	10 24 12
Vehicle Seat Control System using Smart Primary Seat LRUs as Main Controllers	13/671691	11 08 12
Aircraft Brewing Apparatus	13/733747	1 03 13
Improved Aircraft Galley (EDISON)	13/746250	1 21 13
Acoustically and/or Thermally Insulated Galley Shell (EDISON)	13/773908	2 22 13
Dining Chair & Table	13/798489	3 13 13
Seating Arrangement with Separate Seat & Bed	13/798783	3 13 13
Seat Back Diaphragm	13/798995	3 13 13
Cantilevered Tray Table	13/799326	3 13 13
Passenger Closet Area Configuration	13/799372	3 13 13
Convertible Seat-Bed Arrangement	13/799428	3 13 13
Bed Extension	13/803012	3 14 13
Deployable IFE Monitor	13/803184	3 14 13
Composite Beam Spreader	13/804317	3 14 13
Reclining Seat Pivot & Tray Table Mechanism	13/804526	3 14 13
Fabric Seat Back Tray	13/810770	1 17 13
Reduced-Size Modular Washlight Component	13/842725	3 15 13
INTEGRATED GALLEY AND APPLIANCE OPERATING SYSTEM (Smart Bar)	13/848210	3 21 13
Chilled Mini Bar and Cooling Device	13/849088	3 22 13
Refrigeration with Vapor Cycle System	13/849161	3 22 13
Froth Wand for Espresso Maker	13/849314	3 22 13
System & Method for Mounting Galley Inserts in a Galley (EDISON)	13/849808	3 25 13
Composite Galley Construction (EDISON)	13/850781	3 26 13
Cart Bay Door Paddle Latch (EDISON)	13/851257	3 27 13
Galley Door Latch and Floor Seal (EDISON)	13/851399	3 27 13
Aircraft Galley with Improved Chilled Air Distribution (EDISON)	13/852631	3 28 13
Aircraft Galley Chilling System (EDISON)	13/852702	3 28 13
Suspended Aircraft Oven with Stowable Door (EDISON)	13/852983	3 28 13
Aircraft Oven with Improved Steam Generation (EDISON)	13/853019	3 27 13
Aircraft Oven with Sliding Drawer (EDISON)	13/853029	3 28 13
Aircraft Oven with Improved Internal Air Flow (EDISON)	13/853043	3 28 13
Aircraft Refrigerator with Multiple Access Points (EDISON)	13/859590	4 09 13
Improved, Simplified and Integrated Galley Plumbing System (EDISON)	13/862044	4 12 13

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Compact Pressure Check Valve for Galley Plumbing System (EDISON)	13/098108	5 20 13
Compact Air Stop Valve for Galley Plumbing System (EDISON)	13/001354	5 23 13
DEPLOYABLE LEG FLAIL RESTRAINT	13/007079	5 31 13
Modular Power Inverter with Software Control	13/007197	5 31 13
LED Distributed Power Architecture	13/009135	6 04 13
Seating Arrangement	13/012627	6 07 13
Space Saving In-Flight Trash Compactor	13/014315	6 10 13
Twin Aisle Feature Light Architecture	13/019799	6 17 13
Integrated Galley Lighting System (EDISON)	13/019839	6 17 13
Advanced Crewmember Protective Breathing Equipment	13/038707	7 10 13
Class Dividing Passenger Seat Bulkhead	13/039487	7 11 13
Noise Reducing Air Inlet Grille for a Beverage Chiller	13/040012	7 11 13
Improved Breathing Mask and Regulator	13/044547	7 17 13
Sliding IFE Monitor	13/055370	7 31 13
Acoustically and/or Thermally Insulated Galley Shell (EDISON)	13/061715	8 07 13
Method and Apparatus for Thermal Exchange with Two-Phase Media	13/075211	8 23 13
Aircraft Galley Plumbing System Potable Water Manifold/Filter Block	14/019252	9 05 13
Lavatory Storage Compartment	14/035273	9 25 13
Oxygen System having Sensors with Passive RFD Interface	14/041752	9 30 13
Aircraft Interior Lavatory (Spacewall)	14/043500	10 01 13
Aircraft Galley Plumbing System Modular Water Distribution Manifold	14/044487	10 02 13
DEPLOYABLE LEG FLAIL RESTRAINT	14/060143	10 22 13
Compact thermoelectric cooling device for aircraft galley equipment	14/070920	11 04 13
Aircraft Lavatory Oxygen System (SafeLav)	14/073590	11 06 13
Improved Protective Breathing Apparatus Inhalation Duct	14/089587	11 25 13
Lavatory Oxygen Container Adaptor	14/090734	11/26/213
Galley Cart Bay Door Latch	14/091045	11 26 13
On-board Generation of Oxygen for Aircraft Pilots	14/143997	12 30 13
Insert and Method for Anchoring in a Cored Panel	14/168718	1 31 14
Compact Aircraft Galley & Lavatory Arrangement (MAXPAX)	14/175537	2 07 14
Electrically Activated Latch for Aircraft Stowage Bins	14/175714	2 07 14
Aircraft Galley Active Cooling Panel (EDISON)	14/178159	2 11 14
Convertible Aircraft Galley Refrigerator/Chiller with Side Door Access (EDISON)	14/185163	2 20 14

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Stowable Aircraft Cabin Attendant Seat (MAXPAX)	14/198139	3 05 14
Integrated Aircraft Galley System	14/207106	3 12 14
Oxygen Conservation System for Commercial Aircraft (PULSE)	14/213716	3 24 14
Wheelchair Accessible Lavatory	14/225123	3 25 14
Drop-down Armrest	14/230330	3 31 14
Seat Bottom Contour Optimization	14/242105	4 01 14
Vertically Stowed Table Mechanism with Translation	14/245300	4 04 14
Sidewall Armrest for Passenger Seat	14/245835	4 04 14
Overhead Stowage Pod	14/245874	4 04 14
Vehicle Seat with translating seat back linkage pivot	14/247519	4 08 14
Seat with Dual Translating Actuators	14/247745	4 08 14
Seat with Simultaneous Articulation of Fore & Aft Ends of Seat Pan	14/247850	4 08 14
Integrated Vehicle Galley Trash Compactor	14/262496	4 25 14
Wall Mounted Storage Compartment	14/270567	5 06 14
Chemical Oxygen Generator with Chemical Cores Arranged in Parallel	14/272683	5 08 14
Device for Pre-heating Potable Water with Waste Heat	14/301547	6 11 14
Compact Cabin Attendant Seat	14/301598	6 11 14
Aircraft Galley Cart Bay Door	14/302648	6 12 14
Latch for Emergency Oxygen Container	14/302720	6 12 14
Location & Support System for Aircraft Galley Appliance Inserts	14/303207	6 12 14
Aircraft Galley with Appliance Inserts	14/303903	6 13 14
Improved Appliance Insert Connection Interface for an Aircraft Galley	14/304074	6 13 14
Aircraft Galley Air Chiller System	14/321435	7 01 14
ORIT Valve Control for Trapped Ramp	14/327402	7 09 14
Seat Back Diaphragm	14/333923	7 17 14
Aircraft Seat Sidewall Seal	14/338747	7 23 14
Sliding IFE Monitor	14/449634	8 01 14
Liquid Galley Refrigeration System	14/451752	
Compact Drain Strainer (EDISON)	14/463968	8 20 14
Apparatus & Method for Directing Airflow in a Chilled Galley (EDISON)	14/464004	8 20 14
Device for Reversing Chiller Airflow in a Galley (EDISON)	14/464968	8 21 14
Reduced Footprint Galley with Air-Through Carts (EDISON)	14/465082	8 21 14
Universal Modular Ducting for Chilled Galleys	14/467583	8 25 14
Galley Cart Bay Cooling Duct (EDISON)	14/502470	9 30 14
POU Air Chiller for Single Aisle Aircraft	14/502930	9 30 14
Espresso Maker Pressure Relief System	14/507663	10 06 14

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DESCRIPTION	APPL. SER. NO.	FILING DATE
Sliding Legrest	14/517189	10 17 14
Articulating Seat Pan	14/518819	10 21 14
Modular Aircraft Floor Track Adapter System for Boeing 787	14/519756	10 21 14
DEPLOYABLE LEG FLAIL RESTRAINT	14/519996	10 17 14
Removable Armrest Shroud	14/520063	10 21 14
GAIN to GAIN Network for Aircraft Galley System	14/527535	10 29 14
Light Weight Meal Carrier Cart	14/528835	10 30 14
Passenger Seating Arrangement	29/343607	9 21 09
Door Latch	29/361772	5 14 10
Aircraft Galley Beverage Center (Galileo)	29/388941	4 04 11
Aircraft Interior Lavatory (Spacewall)	29/469502	10 10 13
Aircraft Galley Beverage Center (Galileo)	29/485768	3 21 14
A Cascade Thermoelectric Device Cooling System Design for a Vehicle Three-Mode Refrigerator	PRO 61/236963	8 26 09
Small Diameter Pressure Structure Commercial Aircraft Crew Rest	PRO 61/286344	12 09 10
Articulating Lavatory Partition	PRO 61/345250	7 11 13
Articulating Seat Pan	PRO 61/893493	10 21 13
Fully Flat Seating Product for use during Take-off and Landing	PRO 61/902967	11 20 13
Aircraft Seat Headrest	PRO 61/902967	11 12 13
Method and Apparatus for Selectively Adjusting Seat Pitch	PRO 61/909455	11 27 13
Personal Bring-Aboard Passenger Aircraft Seat	PRO 61/909513	11 27 13
Seat Surround with 3D Printed Molding	PRO 61/915771	12 13 13
Advanced flow indication for aircraft passengers (utiliz	PRO 61/918974	12 20 13
Pulse Saturation Oxygen Delivery System	PRO 61/919007	12 20 13
Honeycomb Sandwich Panel having Smooth, Paint-Ready Surface	PRO 61/945330	2 27 14
Unidirectional Prepreg with Differential Resin Content	PRO 61/945344	2 27 14
Friction Bushing	PRO 61/954876	3 18 14
Lattice Panel Structure	PRO 61/955405	3 19 14
Aircraft Galley Air Chiller with Liquid Heat Rejection System	PRO 61/969770	3 24 14
Deployable Stowage & Media Shelf	PRO 61/970631	3 26 14
Electronic Cable Release for Locking Gas Spring	PRO 61/972541	3 18 14
Cradling Seat Recline Mechanism	PRO 61/973957	4 02 14
Vacuum Powered Lifting Mechanism	PRO 61/974095	4 02 14
Telescoping Legrest	PRO 61/974595	4 02 14
Seating Arrangement for full flat bed based PAX feet extending below a low table	PRO 61/975144	4 04 14
Telescoping Tray Table	PRO 61/976212	4 07 14
Modular Lavatory for Narrow Body Aircraft	PRO 61/976342	4 07 14
Occupant Weight Controlled Seat Tilt-Recline Actuat	PRO 61/983781	4 24 14

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B/E Aerospace, Inc. U.S. Patent Applications

DESCRIPTION	APPL. SER. NO.	FILING DATE
APPARATUS AND METHOD FOR PROVIDING ATTITUDE REFERENCE FOR VEHICLE PASSENGERS	PRO 62/011886	6 13 14
Trolley Freezer	PRO 62/022951	7 10 14
Telescoping Door	PRO 62/023530	7 11 14
Double Aircraft Oven with Reduced Width	PRO 62/036982	8 13 14
Variable Stiffness Spring Assist Cushioning System for Lie Flat Aircraft Seating	PRO 62/054674	9 23 14
Solar Windowshade	PRO 62/079643	11 14 14
Galley Cart Compartment Circulated Air Cart Door Interlock	14/083837	11 16 13
Modulated inline Water Heating System for Aircraft Beverage Makers	14/076171	9 11 13
Improved System for Regulating the Dispensing of Passenger Oxygen Supply	14/143997	12 30 13
Refrigerator-Oven Combination for an Aircraft Galley Food Service System	14/224388	3 25 14
Integrated Vehicle Galley Trash Compactor	TBD	TBD
Toaster Broiler (EDISON)	TBD	8 23 14
Universal Galley Cart	TBD	8 30 14
Galley Cart Bay Door Seal	TBD	8 30 14
Oven steam injection system and method	TBD	9 03 14
Integrated non-rectangular touchscreen PCU	TBD	4 08 14
Integrated Graphic User Interface for TSPCU	TBD	4 08 14
Unique mechanism for deploying a B/C seat from TTL to full flat orientation	TBD	4 08 14
Integrated mechanism for tray table storage in wall and dampening of rotation	TBD	4 08 14
FIBER OPTIC VAULT SECURITY SYSTEM	TBD	9 18 14

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Schedule B





TRADEMARKS

<u>Registration No.</u>	<u>Country</u>	<u>Issue Date</u>	<u>Mark</u>
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Schedule B to Grant of Security Interest in United States Patents and Trademarks

**U.S. TRADEMARK PORTFOLIO
OF B/E AEROSPACE, INC.**

Trademark	Country	Status	Application No.	Filing Date	Registration No.	Registration Date	Next Renewal
LASALLE AEROSPACE	USA	Abandoned	85/681517	07-Jul-2012			
B/E TOTALCARE and Design	USA	Allowed	77/198967	06-Jun-2007	3985998	28-Jun-2011	28-Jun-2016
B/E TotalCare							
AGILE	USA	Pending	86/003979	08-Jul-2013			
TAPESTRY	USA	Pending	85/933836	16-May-2013	4645950	25-Nov-2014	25-Nov-2024
PASSION TO INNOVATE. POWER TO DELIVER.	USA	Pending - Allowed	85/865474	4-Mar-2013			
A.M.P. AIRCRAFT MODULAR PRODUCTS and Design	USA	Registered	75/225232	13-Jan-1997	2194725	13-Oct-1998	13-Oct-2018
							
AERO-MED	USA	Registered	73/056345	27-Jun-1975	1031361	27-Jan-1976	27-Jan-2016
AIRCRAFT ECOSYSTEMS	USA	Registered	77/524,006	14-Aug-2008	3796444	01-Jun-2010	01-Jun-2020
ALTITUDE TRAVELER	USA	Registered	73/075972	02-Feb-1976	1046744	24-Aug-1976	24-Aug-2016
B/E AEROSPACE	USA	Registered	85/608844	26-Apr-2012	4278678	22-Jan-2013	22-Jan-2023
B/E AEROSPACE and Design	USA	Registered	74/651906	27-Mar-1995	2100651	30-Sep-1997	30-Sep-2017
							
B/E AEROSPACE and Design	USA	Registered	74/651904	27-Mar-1995	2079741	15-Jul-1997	15-Jul-2017
							
B/E PULSEOX	USA	Registered	77/078,765	09-Jan-2007	3437057	27-May-2008	27-May-2018
BRAZONICS & Design	USA	Registered	77/350487	12-Dec-2007	3523549	28-Oct-2008	28-Oct-2018
BRAZONICS							
C-CAP	USA	Registered	77/172693	04-May-2007	3576993	17-Feb-2009	17-Feb-2019
CIP CONTINUOUS IMPROVEMENT PROCESS and Design	USA	Registered	77/240388	27-Jul-2007	3772087	06-Apr-2010	06-Apr-2020

Trademark	Country	Status	Application No.	Filing Date	Registration No.	Registration Date	Next Renewal
COMBI UNIT	USA	Registered	74/380914	16-Apr-1993	1813604	28-Dec-1993	28-Dec-2023
DIAMOND MINIPOD	USA	Registered	78/921,979	3-July-2006	3,370,800	15-Jan-2008	15-Jan-2018
DNA	USA	Registered	77/241758	30-Jul-2007	3683653	15-Sep-2009	15-Sep-2019
ENDURA	USA	Registered	78/233,381	3-Apr-2003	2859010	29-Jun-2004	29-Jun-2024
ESSENCE	USA	Registered	85/331498	26-May-2011	4165732	26-Jun-2012	26-Jun-2022
eTEXTILES	USA	Registered	78/720640	26-Sep-2005	3259629	3-Jul-2007	3-Jul-2017
EXCELIS	USA	Registered	78/888,802	22-May-2006	3403448	25-Mar-2008	25-Mar-2018
FIXED LIVING SPACE	USA	Registered	78/828,512	3-Mar-2006	3341707	20-Nov-2007	20-Nov-2017
FOCUS	USA	Registered	77/264950	27-Aug-2007	3693202	06-Oct-2009	06-Oct-2019
FSI	USA	Registered	75/477,240	30-Apr-1998	2434485	13-Mar-2001	13-Mar-2021
FSI FLIGHT STRUCTURES – LOGO	USA	Registered	75/477,239	30-Apr-1998	2491677	25-Sep-2001	25-Sep-2021
							
ICE SHIELD	USA	Registered	85/260733	8-Mar-2011	4082600	10-Jan-2012	8-Mar-2021
ICON	USA	Registered	78/462,103	4-Aug-2004	3115193	11-July-2006	11-July-2016
ICON – "I" LOGO	USA	Registered	78/462,584	5-Aug-2004	3110316	27-June-2006	27-Jun-2016
							
INVENTUM	USA	Registered	75/334,902	4-Aug-1997	2225287	23-Feb-1999	23-Feb-2019
IRIS and Design	USA	Registered	77/198952	06-Jun-2007	3640279	16-Jun-2009	16-Jun-2019
							
LASER	USA	Registered	77/264942	27-Aug-2007	3683669	15-Sep-2009	15-Sep-2019
LIGHTLOC	USA	Registered	76/581467	17-Mar-2004	3025318	13-Dec-2005	13-Dec-2015
ME, MYSELF AND I – LOGO	USA	Registered	78/463,442	6-Aug-2004	3107899	20-June-2006	20-June-2016
me, myself and 							
MINI-POD	USA	Registered	78/399,127	9-Apr-2004	3038404	3-Jan-2006	3-Jan-2016

Trademark	Country	Status	Application No.	Filing Date	Registration No.	Registration Date	Next Renewal
OASIS	USA	Registered	78/660,146	28-Jun-2005	3175485	21-Nov-2006	21-Nov-2016
PAL	USA	Registered	77/264959	27-Aug-2007	3734667	05-Jan-2010	05-Jan-2020
PINNACLE	USA	Registered	77/701,821	30-Mar-2009	3794591	25-May-2010	25-May-2020
PINNACLE & design 	USA	Registered	85/089496	21-Jul-2010	4136167	01-May-2012	01-May-2022
PRO-VISION	USA	Registered	85/508657	4-Jan-2012	4530015	13-May-2014	13-May-2024
PULSEOX	USA	Registered	77/078,772	09-Jan-2007	3437058	27-May-2008	27-May-2018
RAPDEC	USA	Registered	76/343727	30-Nov-2001	3021324	29-Nov-2005	29-Nov-2015
SAFELAV-CDS	USA	Registered	85/881057	20-Mar-2013	4598136	2-Sep-2014	2-Sep-2024
SCUFF EDGE	USA	Registered	73/806534	14-Jun-1989	1585736	6-Mar-1990	6-Mar-2020
SMARTCABLE	USA	Registered	76/639680	27-May-2005	3313134	16-Oct-2007	16-Oct-2023
SMARTCOMM	USA	Registered	78/756333	17-Nov-2005	3229233	17-Apr-2007	17-Apr-2017
SMARTGRATE	USA	Registered	76/639720	27-May-2005	3266494	17-Jul-2007	17-Jul-2017
SMARTGRATE-PLUS	USA	Registered	85/042614	19-May-2010	3955985	3-May-2010	3-May-2016
SPACEWALL	USA	Registered	85/099253	3-Aug-2010	4029788	20-Sep-2011	20-Sep-2021
SPECTRUM	USA	Registered	78/076,721	31-Jul-2001	2718141	20-May-2003	20-May-2023
SWEEP-ON	USA	Registered	72/078504	27-Jul-1959	693944	01-Mar-1960	01-Mar-2020
TRILLIUM	USA	Registered	78/827,006	2-Mar-2006	3396226	11-Mar-2008	11-Mar-2018
TSI & Design 	USA	Registered	77/362,673	2-Jan-2008	3601084	7-Apr-2009	7-Apr-2019
UCT	USA	Registered	77/238,741	25-Jul-2007	3850420	21-Sep-2010	21-Sep-2020
ULTIMATE COMFORT TECHNOLOGY	USA	Registered	77/238,730	25-Jul-2007	3623679	19-May-2009	19-May-2019
WEMAC	USA	Registered	73/296337	09-Feb-1981	1186595	19-Jan-1982	19-Jan-2022

Trademark	Country	Status	Application No.	Filing Date	Registration No.	Registration Date	Next Renewal
WOVEN DESIGN 	USA	Registered	74/357042	9-Feb-1993	1907109	25-Jul-1995	25-Jul-2015
WOVEN ELECTRONICS 	USA	Registered	85/148461	8-Oct-2010	4072834	20-Dec-2011	20-Dec-2021
WOVEN ELECTRONICS	USA	Registered	75/057018	12-Feb-1996	2035443	4-Feb-1997	4-Feb-2017
WOVEN ELECTRONICS 	USA	Registered	74/476846	6-Jan-1994	1930636	31-Oct-1995	31-Oct-2015
XCELIS	USA	Registered	78/674,695	20-Jul-2005	3399576	18-Mar-2008	18-Mar-2018
SELECTRA GOURMET	USA	Registered – to Abandon	78/674,711	4-Aug-2005	3238293	1-May-2007	1-May-2017

Schedule C

COPYRIGHTS

<u>Serial No. or Registration No.</u>	<u>Country</u>	<u>Issue or Filing Date</u>	<u>Description</u>
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Schedule C to Grant of Security Interest in United States Patents and Trademarks



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

24201	7590	03/16/2015
FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045		

EXAMINER	
LEE, BENJAMIN P	

ART UNIT	PAPER NUMBER
3641	

NOTIFICATION DATE	DELIVERY MODE
03/16/2015	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketla@fulpat.com
eOfficeAction@fulpat.com

<i>Applicant-Initiated Interview Summary</i>	Application No.	Applicant(s)	
	14/043,500	COOK ET AL.	
	Examiner	Art Unit	
	BENJAMIN P. LEE	3641	

All participants (applicant, applicant's representative, PTO personnel):

(1) BENJAMIN P. LEE. (3) ____.

(2) JAMES W. PAUL. (4) ____.

Date of Interview: 06 March 2015.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: ____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1.

Identification of prior art discussed: Betts (US 3,738,497), Breuer (US 8,109,469), Franke (US 5,577,358).

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Mr. Paul contacted Examiner and indicated that the obviousness rejection of at least the independent claims fails to teach all the requirements in the claim. Examiner asserted that the combination of the Betts and Breuer teaching is proper, however Examiner agrees that the Franke reference may not properly teach the second recess and the related limitations. No specific agreement was reached.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/BENJAMIN P LEE/ Primary Examiner, Art Unit 3641	
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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

ELECTRONIC FILING

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 14/043,500 Confirmation No. : 1662
Inventor : DON COOK, et al.
Filed : April 18, 2011
Title : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3641
Examiner : Benjamin P. Lee
Docket No. : BEALCI-91286
Customer No. : 24201
Date : March 23, 2015

REPLY TO OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in reply to the Office Action dated February 20, 2015, setting a shortened statutory term for a response of three months. Applicant wishes to thank the Examiner for the telephonic interview to discuss the references cited in the Office Action.

Favorable reconsideration is respectfully requested in view of the following remarks.

REMARKS

Claims 1-6, 8 and 11-20 are pending. Favorable reconsideration of the application is respectfully requested.

Claims 1-6, 8 and 11-20 were rejected under 35 U.S.C. §103(a) on the grounds of obviousness from Betts et al. (U.S. Patent 3,738,497; “Betts”) in view of Breuer et al. (US Patent 8,109,469; “Breuer”), and further in view of Franke et al. (U.S. Patent 5,577,358; “Franke”). For the reasons stated below, the Applicant believes that the Office Action does not establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), and pending Claims 1-6, 8 and 11-20 are patentable over the prior art of record.

In the Office Action, the Examiner indicated that Betts discloses a forward wall that is shaped to substantially conform to the shape of the upwardly and aftwardly inclined seat back of the passenger seat, when the seat back is inclined, and includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein. The Examiner also stated in the Office Action that “Betts fails to teach that the enclosure is a lavatory...,” and Betts “fails to teach that the forward wall portion further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess.” Franke was cited as disclosing “a wall or partition with multiple recessed portions situated adjacent a passenger seat (see 33 and 34).”

I. THE OFFICE ACTION DOES NOT CONSIDER OR GIVE WEIGHT TO ALL CLAIM LIMITATIONS

When evaluating a claim under 35 USC103(a), “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art,” and “all the limitations of the claims must be considered and given weight” (See MPEP 2143.03). Applicant

believes that the Office Action ignores and/or does not give weight to several claim limitations in rejecting Claims 1-6, 8 and 11-20 under 35 USC 103(a) based upon the combination of Betts, Breuer and Franke.

Importantly, neither Betts, Breuer nor Franke, individually or in combination, describe any type of wall structure having a “second recess configured to receive at least a portion of the aft-extending seat support therein” of claims 1-6 and 8, or a second "aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein ” of claims 11-20. In fact, it is noted that in Franke the walls 33 and 34 are depicted as rear-facing walls facing forward portions of the aft-positioned seats 36, 36A, and not a forward wall portion or a forward partition of a lavatory aft of the seat as required by all pending claims.

In addition, it is respectfully submitted that while the configuration of the inclined seat back as proposed by the Examiner is not shown in Betts, it is also respectfully submitted that the recess in Betts simply provides a large space with a different shape than the shape presented by the seat back of the passenger seat in Betts, even with the seat back aftwardly inclined as proposed by the Examiner, and that the wall portion in Betts would not “substantially conform to the shape of the upwardly and aftwardly inclined seat back” of Claims 1-6 and 8. Breuer and Franke likewise fail to describe these claim limitations.

In view of the above, Applicant believes that the rejections of claims 1-6, 8 and 11-20 under 35 USC 103(a) do not support a *prima facie* case of obviousness, and should be withdrawn.

II. A PERSON OF ORDINARY SKILL IN THE ART WOULD NOT
HAVE BEEN MOTIVATED TO COMBINE THE CITED REFERENCES

When rejecting claims under 35 USC 103(a), “[t]he test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art...” (See MPEP 2143.01.II) The instant Office Action essentially asserts that a person of ordinary skill in the art of designing aircraft passenger lavatories would have known or would have been motivated to combine the disparate teachings of Betts, Breuer and Franke to arrive at the claimed invention. To the contrary, each of the cited references describes a completely different aircraft structure. Betts describes a coat closet and automatic coat hanger rack. Breuer describes a crew rest module for exclusive use by crew members. Franke describes a class divider wall or partition for separating different classes of passenger seats from each other. Accordingly, the Applicant believes a person of ordinary skill in the art would not have known or been motivated to combine the disclosures of the various aspects of the cited references to arrive at the claimed invention. Therefore, the rejections of claims 1-6, 8 and 11-20 under 35 USC103(a) do not establish a *prima facie* case of obviousness, and should be withdrawn.

III. THE PROPOSED MODIFICATION OR COMBINATION CANNOT
CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

“If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” (See MPEP 2143.01, VI).

Betts describes a coat closet 14 having an overhead coat compartment 18, including an automated coat rack 24 occupying substantially all of the interior space of the coat compartment 18. (See Fig. 1 of Betts) In addition, Betts describes a coat closet 14 with a separate luggage storage space 16 at its bottom. As can be seen in Fig. 1 of Betts, there is no interconnection

between the overhead coat compartment 18 and the lower luggage storage space 16. Since modifying the coat closet 14 of Betts to enclose a lavatory would eliminate the segregated storage compartments 16 and 18, would require removal of the automated overhead coat rack mechanism 24, and would nullify the intended automated function of the coat closet 14, such a modification would render the multi-compartment closet 14 of Betts unsatisfactory for its described intended purpose, would change the principle of operation of the coat closet 14 and the automated coat rack 24 described in Betts and additionally, would render the reference unsatisfactory for its intended and described purpose (MPEP 2143.01V). At least for this reason, the combination of references relied upon to reject the pending claims under 35 USC 103(a) is insufficient to establish a *prima facie* case of obviousness, and the rejections should be withdrawn.

Similarly, allowing a passenger seat to recline into the ascent region 101 of the crew rest module of Breuer in order for portions of a seat back and portions of a seat support of the passenger seat to be received within the exterior wall recess of the crew rest of Breuer would eliminate the stair access, change the principle of operation of the crew rest and render the crew rest unsatisfactory for its intended purpose (MPEP 2143.01V). At least for this reason, the combination of references relied upon to reject the pending claims under 35 USC 103(a) is insufficient to establish a *prima facie* case of obviousness.

IV. IT IS IMPROPER TO COMBINE REFERENCES THAT TEACH AWAY FROM THEIR COMBINATION

When rejecting claims under 35 USC 103(a), “[i]t is improper to combine references where the references teach away from their combination.” (See MPEP §2145.X.D2) Betts does not disclose or suggest any enclosed space suitable for use as an aircraft lavatory. The luggage

storage space 16 and the overhead coat compartment 18 described in Betts are small, separate and discontinuous spaces which are unsuitable for use as a lavatory. Indeed a housing for a motorized coat rack to house "approximately 48 passenger coats weighing up to 160 pounds" is hardly suggestive of application to an enclosure for an aircraft lavatory.

To the contrary, Betts teaches filling closet space with a motorized coat rack and passenger coats as opposed to an aircraft passenger lavatory to accommodate a human being. Accordingly, Betts clearly teaches away from the "enclosed interior lavatory space" of Claim 1. At least for this reason, the combination of references applied to reject the claims under 35 USC 103(a) does not establish a *prima facie* case of obviousness.

Further regarding Claim 1, the only recess in Breuer that could conceivably receive a seat back would be the ascent region 101, which includes the stairs 104, steps 111 and landing 110, which present obstructions which would interfere with receiving a seat back. Furthermore, the recess of the ascent region 101 must remain clear in order to function as an ascent region, so that Breuer et al. clearly teaches away from providing a recess configured to receive at least a portion of an upwardly and aftwardly inclined seat back of a passenger seat, as claimed. For at least this reason, the combination of references relied upon to reject the pending claims under 35 USC 103(a) is insufficient to establish a *prima facie* case of obviousness.

In addition, all exterior walls of the crew rest module 100 described in Breuer are flat and vertical, and include no recesses for receiving any portion of a seat therein as required by Claim 1. (See Figs. 1-11 of Breuer) Indeed, as shown in Fig. 11 of Breuer, no portion of any passenger seat is received within either a first recess or a second recess of any portion of the crew rest module 100, including the lavatory space 102, or the ascent region 101. Accordingly, Breuer clearly teaches away from both the first recess and the second recess required by Claim 1,

and at least for this reason, the references relied upon to reject the claims under 35 USC 103(a) do not establish a *prima facie* case of obviousness.

V. CONCLUSION

It is respectfully submitted that there is no evidence or suggestion in the combination of Betts, Breuer, and Franke of an aircraft lavatory for a cabin of an aircraft of a type that includes a forward wall portion shaped to substantially conform to a shape of the upwardly and aftwardly inclined seat back of a passenger seat, includes a first recess configured to receive at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat therein, and a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess, as is claimed. It is therefore respectfully submitted that Claims 1-6 and 8 patentably distinguish the combination of Betts, Breuer, and Franke.

Regarding Claim 11, the Examiner has acknowledged in the pending action that Betts fails to disclose a second aft-extending recess proximate to a lower end of a forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein, and Franke was cited as disclosing a wall or partition 33 and 34 with multiple recessed portions situated adjacent to a passenger seat. As discussed above, Franke does not teach the second aft-facing recess and related limitations of the claims.

For the same reasons stated above with regard to Claim 1, it is respectfully submitted that there is no evidence or suggestion in the combination of Betts, Breuer, and Franke of an aircraft lavatory including a forward partition that defines a second aft-extending recess proximate to a

lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein, as is claimed. It is therefore respectfully submitted that Claims 11-20 also patentably distinguish the combination of Betts, Breuer, and Franke.

In light of the above, it is respectfully submitted that the rejection of Claims 1-6, 8 and 11-20 on the grounds of obviousness from Betts in view of Breuer, and further in view of Franke does not establish a *prima facie* case of obviousness, and should be withdrawn.

In light of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance, and an early favorable action in this regard is respectfully requested.

The Director is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /James W. Paul/
James W. Paul
Reg. No. 29,967

JWP:lm

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696
Customer No. 24201

Electronic Acknowledgement Receipt	
EFS ID:	21853015
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Laura Martinez
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	23-MAR-2015
Filing Date:	01-OCT-2013
Time Stamp:	17:30:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Reply_to_Office_Action.pdf	44133 08b2d1483f59ef6638b1fe41fa35665cbf3b08ab	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Applicant Arguments/Remarks Made in an Amendment	2	8
Warnings:			
Information:			
Total Files Size (in bytes):		44133	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 14/043,500		Filing Date 10/01/2013		<input type="checkbox"/> To be Mailed				
ENTITY: <input checked="" type="checkbox"/> LARGE <input type="checkbox"/> SMALL <input type="checkbox"/> MICRO												
APPLICATION AS FILED – PART I												
(Column 1)		(Column 2)										
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)				
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A						
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A						
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A						
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =						
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).										
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))												
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL						
APPLICATION AS AMENDED – PART II												
(Column 1)		(Column 2)		(Column 3)								
AMENDMENT	03/23/2015		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		* 17		Minus	** 20	= 0		X \$80 =		0	
	Independent (37 CFR 1.16(h))		* 2		Minus	*** 3	= 0		X \$420 =		0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
	TOTAL ADD'L FEE										0	
(Column 1)		(Column 2)		(Column 3)								
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		*		Minus	**	=		X \$ =			
	Independent (37 CFR 1.16(h))		*		Minus	***	=		X \$ =			
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))											
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))											
	TOTAL ADD'L FEE											
<p>* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.</p> <p>** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".</p> <p>*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".</p> <p>The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.</p>												

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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UNITED STATES DEPARTMENT OF COMMERCE
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NOTICE OF ALLOWANCE AND FEE(S) DUE

24201 7590 04/08/2015
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

EXAMINER

LEE, BENJAMIN P

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 04/08/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

TITLE OF INVENTION: AIRCRAFT INTERIOR LAVATORY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	07/08/2015

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24201 7590 04/08/2015
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

TITLE OF INVENTION: AIRCRAFT INTERIOR LAVATORY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	07/08/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, BENJAMIN P	3641	244-118600

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662
24201 7590 04/08/2015 FULWIDER PATTON LLP HOWARD HUGHES CENTER 6060 CENTER DRIVE, TENTH FLOOR LOS ANGELES, CA 90045			EXAMINER LEE, BENJAMIN P	
			ART UNIT 3641	PAPER NUMBER

DATE MAILED: 04/08/2015

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<i>Notice Requiring Inventor's Oath or Declaration</i>	Application No. 14/043,500	Applicant(s) Don F. Cook	
	Examiner LEE, BENJAMIN P	Art Unit 3641	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) **MUST** be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

- A properly executed inventor's oath or declaration has not been received for the following inventor(s): **Don F. Cook, Liberty Harrington, Philipp Steiner , Robert K. Brauer, and Trevor Skelly.**

Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/043,500	Applicant(s) COOK ET AL.	
	Examiner BENJAMIN P. LEE	Art Unit 3641	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/23/2015.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-6,8 and 11-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. <input type="checkbox"/> Notice of References Cited (PTO-892)	5. <input type="checkbox"/> Examiner's Amendment/Comment
2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance
3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. <input type="checkbox"/> Other _____
4. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____	

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see response, filed 3/23/2015, with respect to the claim rejections have been fully considered and are persuasive. The rejection of claims has been withdrawn.

Allowable Subject Matter

2. Claims 1-6, 8 and 11-20 are allowed.
3. The following is an examiner's statement of reasons for allowance: With respect to claim 1, the closest prior art fails to teach or make obvious, including all the limitations of claim 1, that the forward wall portion further includes a second recess configured to receive at least a portion of the aft-extending seat support therein when at least a portion of the upwardly and aftwardly inclined seat back of the passenger seat is received within the first recess. With respect to claim 11, the closest prior art fails to teach or make obvious, including all the limitations of claim 1, that the forward partition further defines a second aft-extending recess proximate to a lower end of the forward partition, the second aft-extending recess being configured to receive at least a portion of an aft-extending seat support of a forward-positioned passenger seat therein.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Troy Chambers can be reached on 571-272-6874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


/BENJAMIN P LEE/

Primary Examiner, Art Unit 3641

EAST Search History**EAST Search History (Interference)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	989	((244/1r,118.5,118.6,129.1,117r) or (114/116)).CCLS.	US-PGPUB; UPAD	OR	OFF	2015/04/01 12:32

4/ 1/ 2015 12:32:55 PM**C:\ Users\ blee19\ Documents\ EAST\ Workspaces\ 13089063.wsp**

Search Notes 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

CPC- SEARCHED		
Symbol	Date	Examiner
b64d11/00.cpc. or b64d2011/0046.cpc. or b64d11/0023.cpc. or b64d11/06.cpc. or b64d2011/0617.cpc. or b64d2011/0665.cpc. or b63b11/00.cpc. or b63b11/02.cpc. or b63b29/00.cpc. or b63b29/02.cpc.	3/7/2014	LEE
a47k3/00.cpc. or a47k11/00.cpc.	3/7/2014	LEE


CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
244	1r,118.5,118.6,129.1,117r	3/7/2014	LEE
114	116	3/7/2014	LEE

SEARCH NOTES		
Search Notes	Date	Examiner
Text search	3/7/2014	LEE
Inventor search	3/7/2014	LEE

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
244	1r,118.5,118.6,129.1,117r	4/1/2015	LEE
114	116	4/1/2015	LEE


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Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

CPC					
Symbol				Type	Version
B64D	11	02		F	2013-01-01
B64C	1	10		I	2013-01-01
Y02T	50	46		A	2013-01-01


CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	17	
/BENJAMIN P LEE/ Primary Examiner.Art Unit 3641	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION														
CLASS		SUBCLASS				CLAIMED					NON-CLAIMED									
244		118.6				B	6	4	D	11 / 06 (2006.01.01)										
CROSS REFERENCE(S)																				
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																			
114	116																			
244	118.5																			

NONE		Total Claims Allowed:	
		17	
(Assistant Examiner)	(Date)		
/BENJAMIN P LEE/	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
Primary Examiner.Art Unit 3641		1	2
(Primary Examiner)	(Date)		

Issue Classification 	Application/Control No. 14043500	Applicant(s)/Patent Under Reexamination COOK ET AL.
	Examiner BENJAMIN P LEE	Art Unit 3641

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	11	17												
2	2	12	18												
3	3	16	19												
4	4	17	20												
5	5														
6	6														
	7														
7	8														
	9														
	10														
8	11														
9	12														
13	13														
14	14														
15	15														
10	16														

NONE		Total Claims Allowed:	
		17	
(Assistant Examiner)	(Date)		
/BENJAMIN P LEE/ Primary Examiner.Art Unit 3641	9/25/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

24201

OR



Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number

Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

OR

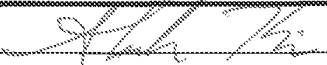
<input type="checkbox"/>	Firm or Individual Name			
	Address			
	City	State	Zip	
	Country			
	Telephone	Email		

Assignee Name and Address: B/E Aerospace, Inc.
 1400 Corporate Center Way
 Wellington, FL 33414

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	12/9/14
Name	ALEXANDER KIM	Telephone	
Title	Assistant Secretary		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Don Cook, et al.
Application No./Patent No.: 14/043,500 Filed/Issue Date: October 1, 2013
Titled: AIRCRAFT INTERIOR LAVATORY
B/E Aerospace, Inc. _____, a corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose one of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose one of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Don Cook, Liberty Harrington, Philipp and Steiner, Robert K. Brauer To: BE Intellectual Property, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 026145, Frame 0191, or for which a copy thereof is attached.

2. From: Trevor Skelly To: BE Intellectual Property, Inc.

The document was recorded in the United States Patent and Trademark Office at
Reel 027067, Frame 0864, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)3. From: BE Intellectual Property, Inc. To: B/E Aerospace, Inc.The document was recorded in the United States Patent and Trademark Office at
Reel 031366, Frame 0932, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.☐ Additional documents in the chain of title are listed on a supplemental sheet(s).☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

ALEXANDER KIM

Printed or Typed Name

Date

12/9/14

Assistant Secretary

Title or Registration Number

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Don Donald	F.	Cook	
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service				
City	Arlington	State/Province	WA	Country of Residence US
Mailing Address of Inventor:				
Address 1		7229 Hawksview Drive		
Address 2				
City	Arlington	State/Province	WA	
Postal Code	98223	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
<input type="checkbox"/> An Address is being provided for the correspondence information of this application.	
Customer Number	24201
Email Address	docketla@fulpat.com Add Email Remove Email

Application Information:

Title of the Invention	AIRCRAFT INTERIOR LAVATORY		
Attorney Docket Number	BEALCI-91286	Small Entity Status Claimed <input type="checkbox"/>	
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	1	Suggested Figure for Publication (if any)	
Filing By Reference :			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	24201		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the application number blank.

Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

<input type="checkbox"/> This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

<input checked="" type="checkbox"/> Authorization to Permit Access to the Instant Application by the Participating Offices
--

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Applicant 1				
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.				
<input type="button" value="Clear"/>				
<input type="radio"/> Assignee	<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Joint Inventor	
<input type="radio"/> Person to whom the inventor is obligated to assign.		<input type="radio"/> Person who shows sufficient proprietary interest		
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:				
Name of the Deceased or Legally Incapacitated Inventor : <input type="text"/>				
If the Applicant is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Mailing Address Information For Applicant:			
Address 1			
Address 2			
City		State/Province	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. <input type="checkbox"/>				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country ⁱ		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	BEALCI-91286
		Application Number	14/043,500
Title of Invention	AIRCRAFT INTERIOR LAVATORY		

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/James W. Paul/			Date (YYYY-MM-DD)	2015-04-23
First Name	James	Last Name	Paul	Registration Number	29967
Additional Signature may be generated within this form by selecting the Add button.					

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Acknowledgement Receipt	
EFS ID:	22153948
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Laura Martinez
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	23-APR-2015
Filing Date:	01-OCT-2013
Time Stamp:	17:49:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	Rsp_to_Informational_Notice_and_Supplmental_ADS.pdf	16148 9416439221a91802639439d09731deed04502d26	no	2

Warnings:

Information:

2	Oath or Declaration filed	Cook_Declaration.pdf	143227 f0c7ba0b2752f09d89397567de48d2682ae205b0	no	2
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
3	Oath or Declaration filed	Harrington_Declaration.pdf	638549 d4b1fb1ff3f288fed5ac9d0e527c94ba6e53b2a0	no	1
Warnings:					
Information:					
4	Oath or Declaration filed	Steiner_Declaration.pdf	635979 3e129923205a0e27256d9fd818b3e2c62425782d	no	1
Warnings:					
Information:					
5	Oath or Declaration filed	Brauer_Declaration.pdf	307202 513922235c91cd0b304dc44346bcc85153d41dccb8	no	1
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
6	Oath or Declaration filed	Skelly_Declaration.pdf	77946 8aa36b439b408d6ec5e66c85c7c411cd541bf3b1	no	1
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
7	Power of Attorney	POA.pdf	88286 38ced48bc05003bab9b027ecde841920a391c2c7	no	1
Warnings:					
Information:					
8	Assignee showing of ownership per 37 CFR 3.73	Ownership_Statement.pdf	194388 07d024699828a6846745c4b3e31835cd0503e6da	no	2
Warnings:					
Information:					
9	Application Data Sheet	Supplemental_ADS.pdf	175746 2d96f9e2ddd898d7aac4b4886dec51d261fdc21	no	6
Warnings:					

Information:	
This is not an USPTO supplied ADS fillable form	
Total Files Size (in bytes):	2277471
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>	

ELECTRONIC TRANSMISSION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 14/043,500 Confirmation No. : 1662
Applicant : Don F. Cook et al.
Filed : October 1, 2013
Title : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3641
Examiner : Benjamin P. Lee
Docket No. : BEALCI-91286
Customer No. : 24201
Date : April 23, 2015

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO INFORMATIONAL NOTICE TO APPLICANT AND
SUPPLEMENTAL APPLICATION DATA SHEET

Dear Sir:

In response to the Informational Notice to Applicant dated March 6, 2014, the executed Declarations, Power of Attorney, Statement Under 37 CFR 3.73(c) and Supplemental Application Data Sheet marked up revised name of inventor, ~~Don~~ **Donald** F. Cook are submitted herewith.

The surcharge of \$140.00 for the submission of the Declarations was previously paid on October 25, 2013.

The Director is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /James W. Paul/
James W. Paul
Registration No. 29,967

JWP/lm
Enclosures

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696
Customer No. 24201

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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)****Title of
Invention****AIRCRAFT INTERIOR LAVATORY**

As the below named inventor, I hereby declare that:

This declaration
is directed to:☐

The attached application, or

☒United States application or PCT international application number 14/043,500filed on October 1, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001
by fine or imprisonment of not more than five (5) years, or both.**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTORInventor: Donald F. Cook

Date (Optional): _____

Signature: 

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

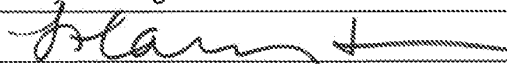
The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

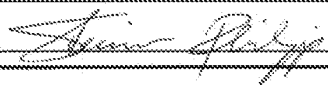
Title of Invention	AIRCRAFT INTERIOR LAVATORY
<p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input type="checkbox"/> The attached application, or <input checked="" type="checkbox"/> United States application or PCT international application number <u>14/043,500</u> filed on <u>October 1, 2013</u></p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p style="text-align: center;">WARNING:</p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p> <p>LEGAL NAME OF INVENTOR</p> <p>Inventor: <u>Liberty Harrington</u> Date (Optional): <u>4/9/2015</u></p> <p>Signature: <u></u></p> <p>Note: An application data sheet (PTO/SS/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</p>	

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

Title of Invention	AIRCRAFT INTERIOR LAVATORY	
<p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input type="checkbox"/> The attached application, or</p> <p><input checked="" type="checkbox"/> United States application or PCT international application number <u>14/043,500</u></p> <p>filed on <u>October 1, 2013</u></p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p style="text-align: center;">WARNING:</p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p>		
LEGAL NAME OF INVENTOR		
Inventor: <u>Philipp Steiner</u>		Date (Optional): <u>4/9/2015</u>
Signature: <u></u>		
<p>Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</p>		

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APPLICATION DATA SHEET (37 CFR 1.76)**

Title of
Invention

AIRCRAFT INTERIOR LAVATORY

As the below named inventor, I hereby declare that:

This declaration
is directed to:

☐

The attached application, or

☒

United States application or PCT international application number 14/043,500

filed on October 1, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Robert K. Brauer

Date (Optional) : _____

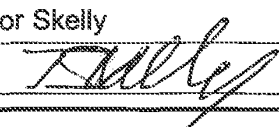
Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	AIRCRAFT INTERIOR LAVATORY
<p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input type="checkbox"/> The attached application, or</p> <p style="margin-left: 150px;"><input checked="" type="checkbox"/> United States application or PCT International application number <u>14/043,500</u></p> <p style="margin-left: 150px;">filed on <u>October 1, 2013</u></p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p style="text-align: center;">WARNING:</p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p>	
<p>LEGAL NAME OF INVENTOR</p> <p>Inventor: <u>Trevor Skelly</u> Date (Optional) : _____</p> <p>Signature:  _____</p>	
<p><small>Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</small></p>	

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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24201 7590 04/08/2015
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Electronically Filed	(Depositor's name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286	1662

TITLE OF INVENTION: AIRCRAFT INTERIOR LAVATORY

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	07/08/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
LEE, BENJAMIN P	3641	244-118600

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Fulwider Patton LLP

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

B/E Aerospace, Inc.

Wellington, FL

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☒ Advance Order - # of Copies 3

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 06-2425 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /James W. Paul/

Date April 23, 2015

Typed or printed name James W. Paul

Registration No. 29,967

ELECTRONIC FILING

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 14/043,500 Confirmation No. : 1662
Inventor : DON COOK, et al.
Filed : April 18, 2011
Title : AIRCRAFT INTERIOR LAVATORY
Art Unit : 3641
Examiner : Benjamin P. Lee
Docket No. : BEALCI-91286
Customer No. : 24201
Date : April 23, 2015

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Communication is responsive to the Notice of Allowability of April 8, 2015 and being concurrently filed with the payment of the Issue Fee.

Please consider the remarks on page 2.

REMARKS

Applicant wishes to thank the Examiner for his Notice of Allowance of the claims in the subject application. While Applicant agrees with the Statement of Reasons for Allowance, Applicant respectfully believes that the claims are patentable or may be patentable for other reasons not stated by the Examiner in his reasons for allowance.

The Director is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /James W. Paul/
James W. Paul
Reg. No. 29,967

JWP:lm

Howard Hughes Center
6060 Center Drive, Tenth Floor
Los Angeles, CA 90045
Telephone: (310) 824-5555
Facsimile: (310) 824-9696
Customer No. 24201

Electronic Patent Application Fee Transmittal				
Application Number:		14043500		
Filing Date:		01-Oct-2013		
Title of Invention:		AIRCRAFT INTERIOR LAVATORY		
First Named Inventor/Applicant Name:		Don F. Cook		
Filer:		James Warren Paul/Laura Martinez		
Attorney Docket Number:		BEALCI-91286		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Utility Appl Issue Fee	1501	1	960	960
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
Extension-of-Time:				
Miscellaneous:				
Printed Copy of Patent - No Color	8001	3	3	9
Total in USD (\$)				969

Electronic Acknowledgement Receipt	
EFS ID:	22155072
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Don F. Cook
Customer Number:	24201
Filer:	James Warren Paul/Laura Martinez
Filer Authorized By:	James Warren Paul
Attorney Docket Number:	BEALCI-91286
Receipt Date:	23-APR-2015
Filing Date:	01-OCT-2013
Time Stamp:	19:14:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 969
RAM confirmation Number	18040
Deposit Account	062425
Authorized User	PAUL, JAMES W
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	
Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	Issue_fee_transmittal.pdf	179700 4288f5b9b9e05ae19463621435af881e737c7ceb	no	1
Warnings:					
Information:					
2	Miscellaneous Incoming Letter	Comments_on_Statement_of_Reasons_For_Allowance.pdf	13480 be53fa92384edbe76b9ee8619a24ac305c9bd965	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	33895 0bf2483b92d4ccf9c1f012f5a81e4a76fce0649	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			227075		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Don F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

POA ACCEPTANCE LETTER

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045



Date Mailed: 04/29/2015

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/23/2015.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/ytbedada/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/043,500	10/01/2013	3641	1740	BEALCI-91286	20	2

CONFIRMATION NO. 1662
CORRECTED FILING RECEIPT



0000000075824038

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

Date Mailed: 06/09/2015

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Donald F. Cook, Arlington, WA;
Liberty Harrington, Seattle, WA;
Philipp Steiner, Seattle, WA;
Robert K. Brauer, Seattle, WA;
Trevor Skelly, Mercer Island, WA;

Applicant(s)

B/E AEROSPACE, INC., WELLINGTON, FL;

Assignment For Published Patent Application

B/E AEROSPACE, INC., WELLINGTON, FL

Power of Attorney: The patent practitioners associated with Customer Number 24201

Domestic Priority data as claimed by applicant

This application is a CON of 13/089,063 04/18/2011 PAT 8590838
which claims benefit of 61/346,835 05/20/2010
and claims benefit of 61/326,198 04/20/2010

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 10/17/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/043,500**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

AIRCRAFT INTERIOR LAVATORY

Preliminary Class

244

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

Receipt date: 10/01/2013 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14043500 - GAU: 3641	
	Filing Date			
	First Named Inventor	Don Cook		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		BEALCI-91286	

	9	8162258	B2	2012-04-00	Joannis et al.	
	10	8167244	B2	2012-05-00	Johnson et al.	

If you wish to add additional U.S. Patent citation information please click the Add button.

Add

U.S.PATENT APPLICATION PUBLICATIONS

Remove

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20060192050	A1	2006-08-00	Cheung et al.	
	2	20070241232	A1	2007-10-00	Thompson	
Change(s) applied to document. /J.M./ 5/12/2015	3	20070295863	A1	2007-10-00	Thompson	December 27, 2007
	4	20090050738	A1	2009-02-26	Breuer	
	5	20090065642	A1	2009-03-00	Cheung et al.	
	6	20090200422	A1	2009-08-13	Johnson	
	7	20090255437	A1	2009-10-15	Hatchet	



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/043,500	07/07/2015	9073641	BEALCI-91286	1662

24201 7590 06/17/2015
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6060 CENTER DRIVE, TENTH FLOOR
LOS ANGELES, CA 90045

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

B/E AEROSPACE, INC., WELLINGTON, FL;
Donald F. Cook, Arlington, WA;
Liberty Harrington, Seattle, WA;
Philipp Steiner, Seattle, WA;
Robert K. Brauer, Seattle, WA;
Trevor Skelly, Mercer Island, WA;

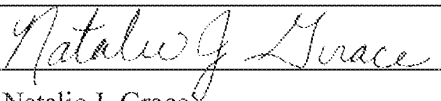
The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

**TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE
REGISTERED PRACTITIONERS**

NOTE: This form is to be submitted with the Power of Attorney by Applicant form to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5. If the Power of Attorney by Applicant form is not accompanied by this transmittal form or an equivalent, the Power of Attorney will not be recognized in the application.

Application Number	14/043,500
Patent Number	9,073,641
Filing Date	October 1, 2013
Issue Date	July 7, 2015
First Named Inventor	Donald F. COOK, et al.
Title	AIRCRAFT INTERIOR LAVATORY
Art Unit	3641
Examiner Name	LEE, BENJAMIN P
Attorney Docket Number	476837US110CONT

SIGNATURE of Applicant or Patent Practitioner

Signature		Date	10/11/16
Name	Natalie J. Grace	Telephone	703-413-3000
Registration Number	65,803		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

■ *Total of 1 forms are submitted.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with the Customer Number:

22850

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO), in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number:

22850

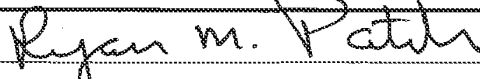
Assignee Name and Address:

B/E Aerospace, Inc.
1400 Corporate Center Way
Wellington, FL 33414

A copy of this form, together with a statement under 37 CFR 3.73(c) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of the practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	2/2/2016
Name	Ryan M. Patch	Telephone	561 346 5343
Title	Vice President - Law, General Counsel & Secretary		

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: B/E AEROSPACE, INC.

Application No./Patent No.: 9,073,641

Filed/Issue Date: July 7, 2015

Entitled: AIRCRAFT INTERIOR LAVATORY

B/E AEROSPACE, INC.

(Name of Assignee)

corporation

(Type of Assignee, e.g., corporation, partnership, government agency, etc.)

States that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____%

in the patent application/patent identified above by virtue of:

☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Inventors To: BE INTELLECTUAL PROPERTY, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 026145, Frame 0191, or for which a copy therefore is attached.

2. From: Inventors To: BE INTELLECTUAL PROPERTY, INC.

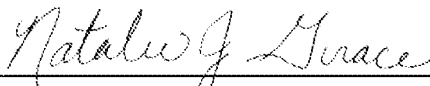
The document was recorded in the United States Patent and Trademark Office at
Reel 027067, Frame 0864, or for which a copy therefore is attached.

3. From: BE INTELLECTUAL PROPERTY, INC. To: B/E AEROSPACE, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 031366, Frame 0932, or for which a copy therefore is attached.

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.



Signature

10/11/16

Date

Natalie J. Grace

Printed or Typed Name - Attorney of Record

703-413-3000

Telephone Number

65,803

Registration Number

Electronic Acknowledgement Receipt	
EFS ID:	27172380
Application Number:	14043500
International Application Number:	
Confirmation Number:	1662
Title of Invention:	AIRCRAFT INTERIOR LAVATORY
First Named Inventor/Applicant Name:	Donald F. Cook
Customer Number:	24201
Filer:	Bradley Davis Lytle/Ellen Murabito
Filer Authorized By:	Bradley Davis Lytle
Attorney Docket Number:	BEALCI-91286
Receipt Date:	11-OCT-2016
Filing Date:	01-OCT-2013
Time Stamp:	10:03:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		476837US-F.pdf	198626	yes	3
			61e3c1b924e22dc9acda7bd054ff11f768236384		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Power of Attorney	1	2
	Assignee showing of ownership per 37 CFR 3.73	3	3
Warnings:			
Information:			
Total Files Size (in bytes):		198626	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>			



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Donald F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

POWER OF ATTORNEY NOTICE

24201
FULWIDER PATTON LLP
HOWARD HUGHES CENTER
6100 CENTER DRIVE, SUITE 1200
LOS ANGELES, CA 90045



Date Mailed: 10/17/2016

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/11/2016.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/hteffer/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/043,500	10/01/2013	Donald F. Cook	BEALCI-91286

CONFIRMATION NO. 1662

POA ACCEPTANCE LETTER

22850
OBLON, MCCLELLAND, MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314



Date Mailed: 10/17/2016

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/11/2016.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

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