(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 March 2009 (26.03.2009)

(51) International Patent Classification:
F25D 23/12 (2006.01)

(21) International Application Number:
PCT/BR/2007/000245

(22) International Filing Date:
18 September 2007 (18.09.2007)

(25) Filing Language:
English

(26) Publication Language:
English

(71) Applicant (for all designated States except US): CARRIER CORPORATION [US/US]; One Carrier Place, P.O. Box 4015, Farmington, Connecticut 06034 (US).

(72) Inventors; and


(74) Agent: MOMSEN, LEONARDOS & CIA.; Rua Teofilo Otoni 63, 10th floor, 20090-080 Rio De Janeiro RJ (BR).


Declarations under Rule 41.17:
— of inventorship (Rule 4.1.7(iv))

Published:
— with international search report (Art. 21(3))

(88) Date of publication of the international search report:
3 September 2009

(54) Title: PARTITION AND CONDENSER SHROUD FOR AN AIR CONDITIONING UNIT

(57) Abstract: An air conditioning unit has a plurality of air conditioning components including at least an evaporator and a condenser. A partition is positioned between the evaporator and condenser. The partition includes a central recessed area to receive a motor and at least one attachment feature that allows at least one of the air conditioning components to be directly secured to the partition. In one example, the attachment feature comprises a plurality of mounting bosses that are used to directly attach the motor to the partition such that the motor is solely supported by the partition. In one example, the attachment feature comprises a snap-fit attachment interface between a condenser cover and the partition. In one example, the attachment feature comprises a connection between the partition and a base pan. In one example, the base pan includes a positioning feature that cooperates with a mating positioning feature on a condenser shroud to hold the condenser shroud fixed to the base pan. In one example, the attachment feature comprises a conduit that holds wiring that extends through the partition. In one example, an evaporator shroud includes a wire support that directs the wiring to the conduit in the partition.
**INTERNATIONAL SEARCH REPORT**

**A CLASSIFICATION OF SUBJECT MATTER**

**IPC**

F25D 23/12( 2006 01)

**USPC**

62/262,429

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)

U S 62/262-263, 428-429

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

**C DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,182,460 B1 (HERNANDEZ et al) 06 February 2001 (06 02 2001), Figs 3-5, column 3, line 60 to column 4, line 45</td>
<td>1, 18-20, 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8, 14, 22, 24</td>
</tr>
<tr>
<td>Y</td>
<td>US 3,724,233 (PUGH et al) 03 April 1973 (03 04 1973), column 3, line 33 to column 4, line 14</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-7, 9-13, 15-17, 21, 23</td>
</tr>
<tr>
<td>A</td>
<td>US 4,385,504 A (PERRONE et al) 31 May 1983 (3 105 1983), column 3, line 54 to column 4, line 40</td>
<td>14, 22, 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2-7, 9-13, 15-17, 21, 23</td>
</tr>
<tr>
<td>A</td>
<td>US 3,906,741 A (TERRY) 23 September 1975 (23 09 1975), see the entire document</td>
<td>1-25</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C

* See patent family annex

**Date of the actual completion of the international search**

11 August 2008 (11 08 2008)

**Date of mailing of the international search report**

16 SEP

**Name and mailing address of the ISA/US**

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P O Box 1450
Alexandria, Virginia 22313-1450

Facsimile No (571) 273-3201

**Authorized officer**

Cheryl J Tyler

Telephone No (571) 772-2975

Form PCT/ISA/2 10 (second sheet) (April 2007)
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 6,434,962 B1 (MORETTI et al) 20 August 2002 (20 08 2002), see the entire document</td>
<td>1-25</td>
</tr>
<tr>
<td>A,P</td>
<td>US 7,386,989 B2 (RYU et al) 17 June 2008 (17 06 2008), see the entire document</td>
<td>1-25</td>
</tr>
</tbody>
</table>