

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
5 December 2002 (05.12.2002)

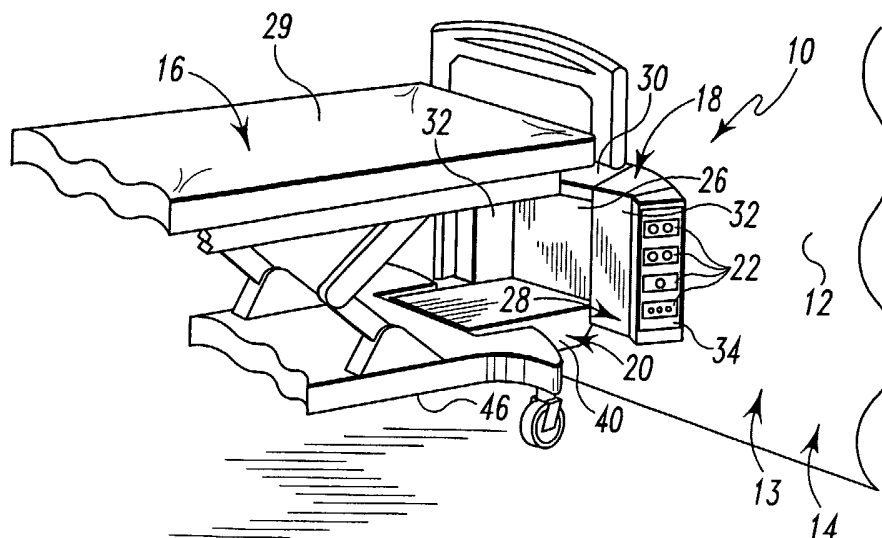
PCT

(10) International Publication Number  
**WO 02/096338 A3**

- (51) International Patent Classification<sup>7</sup>: **A61G 12/00**, 7/05, A61M 1/00, 5/14
- (74) Agent: **CONARD, Richard, D.**; Barnes & Thornburg, 11 South Meridian Street, Indianapolis, IN 46204 (US).
- (21) International Application Number: PCT/US02/16210
- (22) International Filing Date: 23 May 2002 (23.05.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/293,949 25 May 2001 (25.05.2001) US
- (71) Applicant (for all designated States except US): **HILL-ROM SERVICES, INC.** [US/US]; 1069 State Route 46 East, Batesville, IN 47006-0167 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **GALLANT, Dennis, J.** [US/US]; 10208 Cartha Lane, Harrison, OH 45030 (US). **LANCI, Dennis, M.** [US/US]; 7999 Paseo Esmerado, Carlsbad, CA 92009 (US). **RILEY, Carl, William** [US/US]; 3773 North State Road 129, Milan, IN 47031 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, 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, 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, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- (88) Date of publication of the international search report:  
13 February 2003

[Continued on next page]

(54) Title: HEADWALL



(57) Abstract: A headwall (10, 110) is adapted for use with a bed (16, 116) in a room (13, 113) of a healthcare facility (14). The headwall (10, 110) comprises a service delivery unit (20, 120) movable relative to a wall (12, 112) of the room (13, 113) between a storage position and a use position allowing the bed (16, 116) to dock to the service delivery unit (20, 120). It is disclosed to use a headwall (10, 210, 349, 464) to provide services to patient care equipment (342, 418, 518) mounted to a side rail of the bed. Such patient care equipment is, for example, a chest drainage unit (342), an infusion unit (418), or a vacuum bandage unit (518).



---

*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.*

## INTERNATIONAL SEARCH REPORT

International No  
PCT/US 02/16210

|   |  |  |
|---|--|--|
| <b>A. CLASSIFICATION OF SUBJECT MATTER</b>  |  |  |
| IPC 7   | A61G12/00  | A61G7/05 A61M1/00 A61M5/14                         |
| According to International Patent Classification (IPC) or to both national classification and IPC   |  |  |
| <b>B. FIELDS SEARCHED</b>   |  |  |
| Minimum documentation searched (classification system followed by classification symbols)   |  |  |
| IPC 7 A61G A61M A47C  |  |  |
| 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, WPI Data, PAJ   |  |  |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>   |  |  |
| Category *  | Citation of document, with indication, where appropriate, of the relevant passages                         | Relevant to claim No.                              |
| A   | US 4 821 470 A (KAPPERS TIMOTHY A ET AL)<br>18 April 1989 (1989-04-18)<br>the whole document.              | 1,12   |
| A   | US 4 104 710 A (DAMICO FRANK M ET AL)<br>1 August 1978 (1978-08-01)<br>abstract; figure 1                  | 1,12   |
| A   | US 3 514 794 A (POFFERI, GIANCARLO)<br>2 June 1970 (1970-06-02)<br>the whole document                      | 1,12   |
| A   | DE 35 41 017 A (HILL ROM CO INC)<br>5 June 1986 (1986-06-05)<br>page 48, line 3 - line 31; figures 15A,15B | 18   |
| -/--  |  |  |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.   |  |  |
| * Special categories of cited documents :<br>"A" document defining the general state of the art which is not considered to be of particular relevance<br>"E" earlier document but published on or after the international filing date<br>"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)<br>"O" document referring to an oral disclosure, use, exhibition or other means<br>"P" document published prior to the international filing date but later than the priority date claimed<br>"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<br>"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<br>"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.<br>"&" document member of the same patent family |  |  |
| Date of the actual completion of the international search   |  | Date of mailing of the international search report |
| 12 November 2002  |  | 20. 11. 2002                                       |
| Name and mailing address of the ISA<br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016  |  | Authorized officer<br><br>Baert, F                 |

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 02/16210

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | US 4 612 679 A (MITCHELL LARRY D)<br>23 September 1986 (1986-09-23)<br>column 1, line 64 -column 2, line 27<br>column 3, line 61 -column 4, line 5<br>column 9, line 36 -column 11, line 7;<br>figures<br>--- | 25                    |
| A          | US 5 097 550 A (MARRA JR JOHN J)<br>24 March 1992 (1992-03-24)<br>column 3, line 7 - line 38; figure 1<br>---   | 25,27,28              |
| A          | US 5 319 816 A (RUEHL JOHN W)<br>14 June 1994 (1994-06-14)<br>column 3, line 36 - line 47; figures 1,2<br>---   | 26                    |
| A          | US 5 507 734 A (EVERETT JR FREDERICK A ET<br>AL) 16 April 1996 (1996-04-16)<br>column 11, line 63 -column 12, line 1;<br>figure 1<br>-----  | 38                    |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 02/16210

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-24

Headwall comprising first and second delivery units whereby the second is movable from a storage to a use position.

2. Claims: 25-44

Patient care apparatus including a bed having a side rail with a cavity wherein a patient care equipment with control unit is positioned.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US 02/16210

| Patent document cited in search report | Publication date | Patent family member(s)   | Publication date   |
|--|------------------|---|--|
| US 4821470 A                           | 18-04-1989       | US 5323565 A<br>US 5653064 A<br>US 5060425 A  | 28-06-1994<br>05-08-1997<br>29-10-1991   |
| US 4104710 A                           | 01-08-1978       | NONE  |  |
| US 3514794 A                           | 02-06-1970       | NONE  |  |
| DE 3541017 A                           | 05-06-1986       | US 4646211 A<br>CA 1252160 A1<br>DE 3541017 A1<br>DK 534985 A ,B,<br>FR 2575779 A1<br>GB 2169014 A ,B<br>IT 1209672 B<br>NO 854619 A ,B,<br>SE 463394 B<br>SE 8505448 A   | 24-02-1987<br>04-04-1989<br>05-06-1986<br>20-05-1986<br>11-07-1986<br>02-07-1986<br>30-08-1989<br>20-05-1986<br>19-11-1990<br>20-05-1986   |
| US 4612679 A                           | 23-09-1986       | NONE  |  |
| US 5097550 A                           | 24-03-1992       | CA 2111351 A1<br>EP 0606218 A1<br>WO 9222233 A1<br>US 5175897 A   | 23-12-1992<br>20-07-1994<br>23-12-1992<br>05-01-1993   |
| US 5319816 A                           | 14-06-1994       | NONE  |  |
| US 5507734 A                           | 16-04-1996       | US 5300050 A<br>US 5026358 A<br>US 4784642 A<br>AT 97583 T<br>AT 142513 T<br>AT 142512 T<br>AU 683350 B2<br>AU 1652895 A<br>AU 656054 B2<br>AU 3284493 A<br>AU 630642 B2<br>AU 4603389 A<br>AU 588135 B2<br>AU 7939687 A<br>BR 8705294 A<br>CA 1292161 A1<br>CA 1324939 A2<br>CA 1334645 A1<br>DE 3751905 D1<br>DE 3751905 T2<br>DE 3751906 D1<br>DE 3751906 T2<br>DE 3788265 D1<br>DE 3788265 T2<br>DE 8713434 U1<br>DE 8717234 U1<br>DK 54394 A<br>DK 54494 A<br>DK 522687 A<br>EP 0263664 A2 | 05-04-1994<br>25-06-1991<br>15-11-1988<br>15-12-1993<br>15-09-1996<br>15-09-1996<br>06-11-1997<br>10-08-1995<br>19-01-1995<br>01-04-1993<br>05-11-1992<br>29-03-1990<br>07-09-1989<br>21-04-1988<br>24-05-1988<br>19-11-1991<br>07-12-1993<br>07-03-1995<br>17-10-1996<br>27-02-1997<br>17-10-1996<br>27-02-1997<br>05-01-1994<br>17-03-1994<br>05-05-1988<br>09-06-1988<br>11-05-1994<br>11-05-1994<br>04-05-1988<br>13-04-1988 |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/16210

| Patent document<br>cited in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---------------------|----------------------------|---------------------|
| US 5507734 A                              |                     | EP 0468543 A2              | 29-01-1992          |
|   |                     | EP 0467425 A2              | 22-01-1992          |
|   |                     | EP 0468544 A2              | 29-01-1992          |
|   |                     | ES 2048738 T3              | 01-04-1994          |
|   |                     | ES 2091844 T3              | 16-11-1996          |
|   |                     | ES 2091270 T3              | 01-11-1996          |
|   |                     | FI 874379 A ,B,            | 08-04-1988          |
|   |                     | FI 944196 A                | 12-09-1994          |
|   |                     | FI 944197 A                | 12-09-1994          |
|   |                     | IE 65088 B1                | 04-10-1995          |
|   |                     | IE 79443 B1                | 06-05-1998          |
|   |                     | IE 940685 L                | 07-04-1988          |
|   |                     | IE 79444 B1                | 06-05-1998          |
|   |                     | IE 940686 L                | 07-04-1988          |
|   |                     | IL 84052 A                 | 26-05-1995          |
|   |                     | IL 100041 A                | 25-01-1994          |
|   |                     | IN 169588 A1               | 16-11-1991          |