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

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 8 September 2006 (08.09.2006)

(51) International Patent Classification: A47C 7/46 (2006.01)

(21) International Application Number:

PCT/US2006/007822

- (22) International Filing Date: 1 March 2006 (01.03.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

60/657,312

1 March 2005 (01.03.2005)

- (71) Applicant (for all designated States except US): HA-WORTH, INC. [US/US]; One Haworth Center, 1400 Highway M-40, Holland, Michigan 49423 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BEYER, Pete, J. [US/US]; 3210 48th St., Hamilton, Michigan 49419 (US). WILLETTE, Joe [US/US]; 15506 Groesbeck St., Grand Haven, Michigan 49417 (US). WILKERSON, Larry, A. [US/US]; 1340 Buth NE, Comstock Park, Michigan 49321

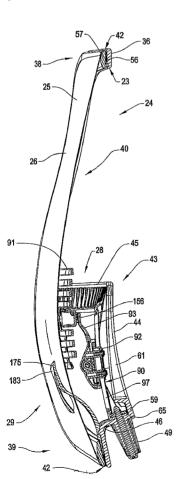
(10) International Publication Number WO 2006/094261 A3

(US). SIMPSON, Stephen, J. [US/US]; 2345 Deer Trail Drive NE, Grand Rapids, Michigan 49505 (US).

- (74) Agents: MAKI, Mark, L. et al.; FLYNN, THIEL, BOUTELL & TANIS, P.C., 2026 Rambling Road, Kalamazoo, Michigan 49008-1631 (US).
- (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, KM, KN, KP, KR, KZ, 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, RU, SC, SD, SE, SG, SK, SL, SM, 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,

[Continued on next page]

(54) Title: CHAIR BACK WITH LUMBAR AND PELVIC SUPPORTS



(57) Abstract: An office chair (10) is provided having a back assembly (24) which is configured to provide supplemental support to the back of a chair occupant in addition to the support provided by the primary support surface (31) of the chair back. The chair back includes a lumbar support unit (28) having a lumbar support pad (91) wherein asymmetric support is provided to the left and right halves of the lumbar pad (91). As such, the asymmetric support loads are independently adjustable to more comfortably support a chair occupant. The chair back also includes a pelvic support pad (29) which is disposed vertically adjacent to the lumbar support (28).



WO 2006/094261 A3



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, 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

(88) Date of publication of the international search report: 8 February 2007

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 application No PCT/US2006/007822

A CLASS	FIGATION OF OUR LEGT MATTER			
INV.	IFICATION OF SUBJECT MATTER A47C7/46			
According t	o International Patent Classification (IPC) or to both national classi	fication and IPC		
	SEARCHED			
Minimum do A47C	ocumentation searched (classification system followed by classific	ation symbols)		
	tion searched other than minimum documentation to the extent tha			
	ata base consulted during the International search (name of data t	base and, where practical, search terms used		
	ternal, WPI Data, PAJ			
	ENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where appropriate, of the r	elevant passages	Relevant to claim No.	
Χ	WO 03/063651 A (WALKER, BROCK, M; KURRASCH, ANDREW, J; MARTIN, TED, R) 7 August 2003 (2003-08-07)		1-3,5	
A	page 1, lines 6-9 page 3, lines 1,2 page 5, lines 18,19 page 6, line 26 - page 7, line 4 page 9, lines 6-12; figures 1-3	4 ,5-8	4,12-21	
P,X	US 2005/062323 A1 (DICKS GERALD 24 March 2005 (2005-03-24) abstract; figures	G)	1	
Furth	er documents are listed in the continuation of Box C.	X See patent family annex.		
"A" documer conside "E" earlier de filing da "L" documen which is citation "O" documer other m "P" documen later tha	at which may throw doubts on priority claim(s) or solited to establish the publication date of another or other special reason (as specified) at referring to an oral disclosure, use, exhibition or eans at published prior to the international filling date but an the priority date claimed ctual completion of the international search	"T" later document published after the interr or priority date and not in conflict with the cited to understand the principle or their invention. "X" document of particular relevance; the clacannot be considered novel or cannot be involve an inventive step when the document of particular relevance; the clacannot be considered to involve an invedocument is combined with one or more ments, such combination being obvious in the art. "&" document member of the same patent fa	ne application but bry underlying the simed invention se considered to ument is taken alone imed invention entive step when the so other such docu- to a person skilled	
1 August 2006 Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Amghar, Norddin		

International application No. PCT/US2006/007822

INTERNATIONAL SEARCH REPORT

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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 III Observations where unity of invention is lacking (Continuation of item 3 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.
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.:
A. 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.: 1-5, 12-17, 18-21
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: 1-5,12-17,18-21

Directed to a lumbar support including independent adjustment mechanisms to vary the pressure distribution.

2. claims: 6-11

Directed to a lumbar pad comprising a plurality of concentric elastomeric rings.

3. claims: 22-24

Directed to a chair having a ring-like annular back frame defining an insertion pocket for a support pad arm.

4. claim: 25

Directed to a chair with hooks for connecting the lumbar support and allowing it to pivot.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2006/007822

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 03063651	Α	07-08-2003	CA GB MX	2473978 A1 2400028 A PA04007241 A	07-08-2003 06-10-2004 16-05-2005
US 2005062323	A1	24-03-2005	NONE		

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