



(51) International Patent Classification:
A47C 27/00 (2006.01) B68G 7/06 (2006.01)

(21) International Application Number:
PCT/US2010/035587

(22) International Filing Date:
20 May 2010 (20.05.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/216,787 21 May 2009 (21.05.2009) US

(71) Applicant (for all designated States except US): EDI-ZONE, LLC [US/US]; 123 East 200 North, Alpine, Utah 84004 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PEARCE, Tony M. [US/US]; 801 South 1230 East, Alpine, Utah 84004 (US). NILSON, Joseph T. [US/US]; 858 East Healey Homestead Circle, Alpine, Utah 84004 (US).

(74) Agents: GUNN, J., Jeffrey et al.; Traskbitt, 230 South 500 East, Suite 300, P.O. Box 2550, Salt Lake City, Utah 84110-2550 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

— with international search report (Art. 21(3))
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
3 March 2011

(54) Title: CUSHIONS COMPRISING CORE STRUCTURES AND RELATED METHODS

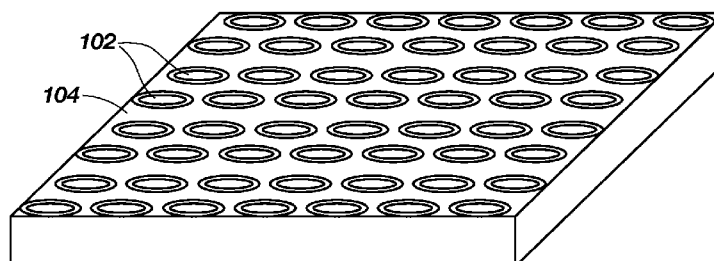


FIG. 1B

(57) Abstract: Cushions include a plurality of core structures and a support material at least partially surrounding each core structure of the plurality of core structures. The core structures and support material comprise different deformable polymer materials. Each of the core structures may be configured as a column having a column axis. Methods of forming cushions include forming a plurality of core structures, and at least partially surrounding each core structure of the plurality of core structures with a support material comprising a second, different deformable polymer material. The core structures may be configured such that each core structure is integrally interconnected along a length thereof to no more than two other core structures of the plurality of core structures.



A. CLASSIFICATION OF SUBJECT MATTER**A47C 27/00(2006.01)i, B68G 7/06(2006.01)i**

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)

A47C 27/00; G06F 15/16; H04J 3/22; H04B 7/02

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: cushion, mattress, pocket, deformable, polymer & core

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2007-0026934 A (JUNETWORK CO., LTD.) March 2007 See claims 1 to 14 and figures 1 to 7	1-20
A	KR 20-0380271 Y1 (LIM, YOUNG JA) 29 March 2005 See abstract and figures 1 to 4	1-20
A	US 2004-0172766 A1 (FABIO FORMENTI) 09 September 2004 See abstract and figures 1 to 9	1-20
A	US 4698864 A1 (GRAEBE; ROBERT H.) 13 October 1987 See abstract and figures 1 to 12	1-20
A	US 5369828 A1 (GRAEBE; ROBERT H.) 06 December 1994 See claims 1 to 8 and figures 1 to 19	1-20
A	KR 20-0315625 Y1 (DASAN TECH. CO., LTD.) 09 June 2003 See claims 1 & 2 and figures 1 to 5	1-20



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 application or patent 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 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

28 DECEMBER 2010 (28.12.2010)

Date of mailing of the international search report

03 JANUARY 2011 (03.01.2011)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

PARK, SUNG WOO

Telephone No. 82-42-481-8140



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2010/035587

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2007-0026934 A	09.03.2007	None	
KR 20-0380271 Y1	29.03.2005	None	
US 2004-0172766 A1	09.09.2004	US 2002-0162173 A1	07.11.2002
US 4698864 A1	13.10.1987	None	
US 5369828 A1	06.12.1994	AU 694288 B2	16.07.1998
		CA 2108685 C	07.11.2000
		CA 2203834 C	02.05.2000
		CA 2307969 C	09.04.2002
		EP 0585416 B1	13.10.1999
		EP 0724395 B1	26.08.1998
		EP 0738121 A1	11.12.2002
		EP 0788324 A1	25.10.2000
		JP 03-231327 B2	14.09.2001
		JP 03-534317 B2	19.03.2004
		JP 03-683589 B2	17.08.2005
		JP 08-502914 A	02.04.1996
		JP 09-507778 A	12.08.1997
		KR 10-0318300 B1	22.04.2002
		US 5317773 A1	07.06.1994
		US 5461741 A1	31.10.1995
		US 5551107 A1	03.09.1996
		US 5561875 A1	08.10.1996
		US 5596781 A1	28.01.1997
		US 5613257 A1	25.03.1997
		WO 93-16622 A1	02.09.1993
		WO 94-10878 A1	26.05.1994
		WO 96-12426 A1	02.05.1996
		WO 96-14004 A1	17.05.1996
KR 20-0315625 Y1	09.06.2003	None	