

(51) International Patent Classification:
A47C 1/02 (2006.01)(21) International Application Number:
PCT/US2013/020277(22) International Filing Date:
4 January 2013 (04.01.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/344,330 5 January 2012 (05.01.2012) US(71) Applicant: L & P PROPERTY MANAGEMENT
COMPANY [US/US]; 4095 Firestone Boulevard, South
Gate, CA 90280 (US).(72) Inventor: LAWSON, Gregory, Mark; c/o L & P Property
Management Company, 4095 Firestone Boulevard, South
Gate, CA 90280 (US).(74) Agents: TABOR, Benjamin, P. et al.; Shook, Hardy &
Bacon LLP, 2555 Grand Boulevard, Kansas City, MO
64108 (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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
TM, TN, TR, TT, TZ, UA, UG, 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, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, 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))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))

(88) Date of publication of the international search report:
12 September 2014

(54) Title: LINKAGE MECHANISM FOR A DUAL-MOTOR LIFTING RECLINER

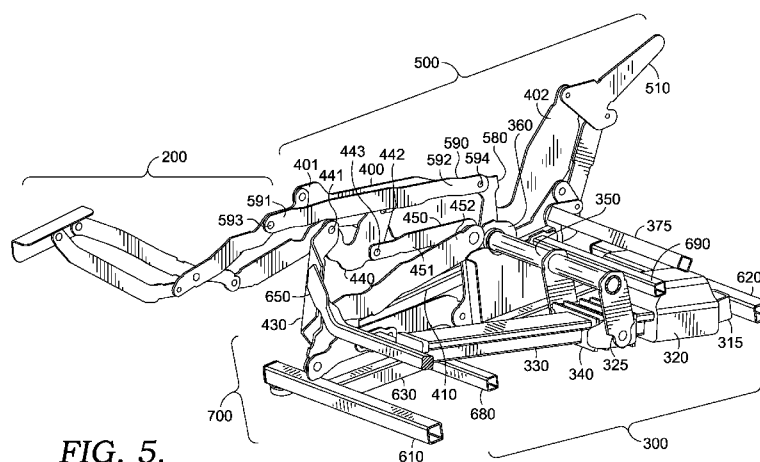


FIG. 5.

(57) Abstract: A seating unit that includes a linkage mechanism adapted to move the seating unit between closed, extended, reclined, and seat-lift positions is provided. The linkage mechanism includes a footrest assembly and a back-mounting link coupled to a seat-mounting plate, a base plate coupled to a lift-base assembly via a lift assembly, a drive bracket, a motor tube, and two linear actuators for automating adjustment of the linkage mechanism. In operation, a first phase involves a second linear actuator rotating the motor tube, thereby causing the seat-adjustment assembly to bias the seat-mounting plate. A second phase involves a first linear actuator rotating the drive bracket, thereby causing the footrest assembly to extend or retract without affecting the bias of the back-mounting link. A third phase involves the first linear actuator causing the lift assembly to raise and tilt the base plate directly over the lift-base assembly.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/020277

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47C 1/02 (2013.01)

USPC - 297/330

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)

IPC(8) - A47C 1/02, 1/035 (2013.01)

USPC - 74/469; 297/69, 75, 83, 84, 85M, 330, 331

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

CPC - A47C 1/035 (2013.01)

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

PatBase, Google Patents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0193373 A1 (LAWSON et al) 11 August 2011 (11.08.2011) entire document	20
Y		1-19
Y	US 2008/0150329 A1 (LAWSON) 26 June 2008 (26.06.2008) entire document	1-19
Y	US 4,786,107 A (CROCKETT) 22 November 1988 (22.11.1988) entire document	6-15, 17-18
Y	US 2003/0047973 A1 (PELLERIN) 13 March 2003 (13.03.2003) entire document	7-15

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

* 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 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

21 February 2013

Date of mailing of the international search report

01 MAR 2013

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:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774