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- (71) Applicant: **AUGUST HOME INC.** [US/US]; 665 3rd Street, #150, San Francisco, CA 94107 (US).
- (72) Inventors: **CHENG, Shih, Yu, Thomas**; 33563 2nd Street, Union City, CA 94587 (US). **JOHNSON, Jason**; 665 3rd Street #150, San Francisco, CA 94107 (US). **KIM, Christopher**; 1318 Guerrero Street, San Francisco, CA 94110 (US). **ARANDA, Joseph**; 559 B Shotwell Street, San Francisco, CA 94110 (US).
- (74) Agents: **DAVIS, Paul et al.**; Mintz Levin Cohn Ferris Glovsky and Popeo, P.C., 44 Montgomery Street, 36th Floor, San Francisco, CA 94104 (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, IR, IS, JP, KE, KG, 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, SA, 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.

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(54) Title: INTELLIGENT DOOR LOCK SYSTEM

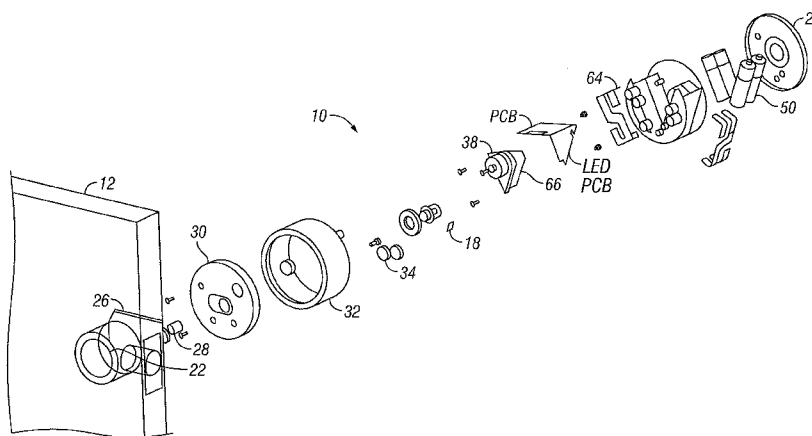


FIG. 1B

(57) Abstract: An intelligent door lock system is provided with a position sensing device configured to be coupled to a drive shaft of a lock device. The position sensing device senses position of the drive shaft and assists in locking and unlocking a lock of a lock device. An engine is provided with a memory coupled to the positioning sensing device. A circuit is coupled to the engine and an energy source is coupled to the circuit. A device converts energy into mechanical energy and is coupled to the circuit, positioning sensing device and the drive shaft. The device that converts energy is coupled to the energy source to receive energy from the energy source.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/26254

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - E05B 55/12 (2014.01) CPC - E05B 47/00 According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC(8) - E05B 55/12 (2014.01); CPC - E05B 47/00</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC: 292/144,70/124.70*; CPC:E05B 47/00, E05B 55/12</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic Database Searched: Patbase, Google Patents, Proquest Dialog; Search Terms: door, locking, deadbolt, drive shaft, memory, engine, unlock, circuit, mechanical energy, accelerometer, hall effect, intelligent, position sensing device, wireless, contact ticks, optical camera, encoder, speaker, current, voltage, sensor, temperature, etc.,</p>																				
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <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 --- Y</td> <td>US 5,594,430 A (Cutter et al.) 14 January 1997 (14.01.1997); entire document, especially FIG. 1, 2, Abstract, col.2,ln 7-19, col.2, ln 60-col.3,ln 23, col.3, ln 43-65, col.4,ln 40-51.</td> <td>1, 2, 4, 9, 20, 24, 25, 34, 35, 39, 40 ----- 3, 5-8, 10-19, 21-23, 26-33, 36-38</td> </tr> <tr> <td>Y</td> <td>US 6,967,562 B2 (Menard et al.) 22 November 2005 (22.11.2005); entire document, especially FIG. 3A, 9B, Abstract, col.1, ln 48-67, col. 6, ln 1-7, col.7, ln 28-38, col. 7, ln 61 - col.8, ln 9, col. 9, ln 55-59, col.11, ln 2-4</td> <td>3, 5, 10, 12-16, 19, 26, 28, 30-32, 41</td> </tr> <tr> <td>Y</td> <td>US 8,269,627 B2 (Gore et al.) 18 September 2012 (18.09.2012); entire document, especially Abstract, col.2, ln 13-31, col.5, ln 1-4, col.5, ln 8-23, col.10, ln 56-60, col.11, ln 65 - col.12, ln 13, col.12, ln 39-44, col.13, ln 23-42</td> <td>6-8, 16, 21-23, 27, 36-38</td> </tr> <tr> <td>Y</td> <td>US 2013/0062892 A1 (Chow et al.) 14 March 2013 (14.03.2013); especially Abstract, para [0025]</td> <td>17, 18, 33</td> </tr> <tr> <td>Y</td> <td>US2011/0109678 A1 (Schwartz et al.) 12 May 2011 (12.05.2011); especially Abstract, para [0037], [0064], [0087]</td> <td>11, 29, 42</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X --- Y	US 5,594,430 A (Cutter et al.) 14 January 1997 (14.01.1997); entire document, especially FIG. 1, 2, Abstract, col.2,ln 7-19, col.2, ln 60-col.3,ln 23, col.3, ln 43-65, col.4,ln 40-51.	1, 2, 4, 9, 20, 24, 25, 34, 35, 39, 40 ----- 3, 5-8, 10-19, 21-23, 26-33, 36-38	Y	US 6,967,562 B2 (Menard et al.) 22 November 2005 (22.11.2005); entire document, especially FIG. 3A, 9B, Abstract, col.1, ln 48-67, col. 6, ln 1-7, col.7, ln 28-38, col. 7, ln 61 - col.8, ln 9, col. 9, ln 55-59, col.11, ln 2-4	3, 5, 10, 12-16, 19, 26, 28, 30-32, 41	Y	US 8,269,627 B2 (Gore et al.) 18 September 2012 (18.09.2012); entire document, especially Abstract, col.2, ln 13-31, col.5, ln 1-4, col.5, ln 8-23, col.10, ln 56-60, col.11, ln 65 - col.12, ln 13, col.12, ln 39-44, col.13, ln 23-42	6-8, 16, 21-23, 27, 36-38	Y	US 2013/0062892 A1 (Chow et al.) 14 March 2013 (14.03.2013); especially Abstract, para [0025]	17, 18, 33	Y	US2011/0109678 A1 (Schwartz et al.) 12 May 2011 (12.05.2011); especially Abstract, para [0037], [0064], [0087]	11, 29, 42
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<p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/></p>																				
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>“A” document defining the general state of the art which is not considered to be of particular relevance</td> <td>“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</td> </tr> <tr> <td>“E” earlier application or patent but published on or after the international filing date</td> <td>“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</td> </tr> <tr> <td>“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)</td> <td>“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</td> </tr> <tr> <td>“O” document referring to an oral disclosure, use, exhibition or other means</td> <td>“&” document member of the same patent family</td> </tr> <tr> <td>“P” document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			“A” document defining the general state of the art which is not considered to be of particular relevance	“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	“E” earlier application or patent but published on or after the international filing date	“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	“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)	“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	“O” document referring to an oral disclosure, use, exhibition or other means	“&” document member of the same patent family	“P” document published prior to the international filing date but later than the priority date claimed									
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<p>Date of the actual completion of the international search</p> <p>14 October 2014 (14.10.2014)</p>		<p>Date of mailing of the international search report</p> <p align="center">18 NOV 2014</p>																		
<p>Name and mailing address of the ISA/US</p> <p>Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201</p>		<p>Authorized officer:</p> <p align="center">Lee W. Young</p> <p>PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774</p>																		