

Title:	WHEEL RIM-MOUNTED REGENERATION COIL-MAGNET SYSTEM			
Priority:	US20150630999 20150225	RU20160105451 20160218	US20170649199 20170713	

Family:	Publication number	Publication date	Application number	Application date
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	■ US9771124 BB	20170926	US20150630999	20150225

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Assignee(s):(std): FORD GLOBAL TECH LLC ; FORD GLOUBAL TEKNOLODZHIZ ELELSI

Assignee(s): FORD GLOBAL TECHNOLOGIES LLC

Inventor(s):(std): JAMEL SEAGRAVES ; JUSTIN CARRUS ; SUDIPTO AICH ; CHIH WEI TANG ; DAVID GOMEZ ; GOMEZ DEVID ; KARRUS DZHASTIN ; TAN CHIKH VEJ ; SIGREJVS DZHAMEL ; TANG CHIH WEI ; SEAGRAVES JAMEL ; AICH SUDIPTO ; GOMEZ DAVID ; CARRUS JUSTIN

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(IPC 8-9): B62M6/65 B62M6/80 H02J7/00 H02J7/14 (Advanced/Invention)

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B60L2250/12 B60L2250/16 B62J6/06 B62L1/00 B62M6/65 Y02T10/7291 Y02T90/16 H02J7/0052

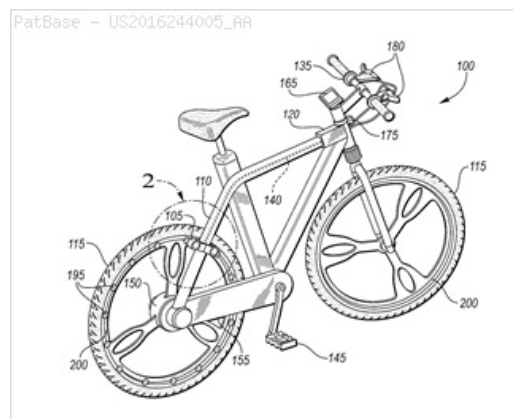
US class: 1/1 280/288.4

Classification Explorer

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Abstract:

A bicycle includes a frame, a charging circuit carried by the frame and configured to capture energy associated with movement of the bicycle, a power module carried by the frame, and a switch disposed electrically between the charging circuit and power module. The power module, in response to an indication that the bicycle is travelling downhill, closes the switch to enable energy transfer between the charging circuit and power module.



Title:	METHOD AND APPARATUS WITH NEGATIVE RESISTANCE IN WIRELESS POWER TRANSFERS					
Priority:	US20080053000P	20080513	US20080053000	20080513	US20080053004	20080513
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Family:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A61L2/02 B60L1/00 G06F13/00 G06K19/07 G06K7/00 G06K7/10 G08B1/08 G08B21/00 H01F21/00 H01F27/42 H01F37/00 H01F38/00 H01F38/14 H01M10/44 H01Q1/00 H01Q1/22 H01Q1/38 H01Q1/50 H01Q19/02 H01Q3/24 H01Q7/00 H01Q9/04 H02J17/00 H02J5/00 H02J50/00 H02J50/12 H02J50/20 H02J50/40 H02J50/50 H02J50/90 H02J7/00 H02J7/02 H02J7/04 H03H7/40 H04B1/00 H04B1/04 H04B1/16 H04B1/18 H04B1/38 H04B1/59 H04B3/36 H04B5/00 H04B5/02 H04B7/14 H04L12/00 H04M1/00 H04M1/02 (Advanced/Invention); H02J17/00 H04B1/18 H04B5/00 (Advanced/Non-invention); B60L1/00 G06K19/07 G06K7/00 G08B1/00 G08B21/00 H01Q1/22 H01Q1/50 H02J17/00 H02J5/00 H02J7/00 H02J7/02 H04B1/16 H04B3/36 H04B5/00 H04B5/02 (Core/Invention); H01Q7/00 H02J17/00 H02J7/02 H04B5/00 (Core/Non-invention)

International class (IPC 1-7): G06K19/07 G06K19/07 G06K7/00 G06K7/00 H04B5/02

CPC: H02J7/0044 A61L2/08 A61L2/07 A61L2/02 H02J7/0042 H02J50/00 H04B10/25759 Y02T10/7216 H02J50/40 H02J50/50 H02J50/60 H02J50/80 H02J50/70 H02J7/0027 H04B5/0075 H04B5/0087 H04B5/0093 H02J50/20 G06K7/0008 G06K7/10178 G06K19/0701 G06K19/0715 G06K19/0723 H01Q1/2225 H01Q1/38 H01Q7/00 H02J5/005 H02J7/025 H04B5/0031 H04B5/0037 H04B5/02 H01F38/14 Y10T307/406 H02J50/12 H02J50/90 H02J50/10

European class: A61L2/02 A61L2/07 A61L2/08 G06K19/07A G06K19/07A9 G06K19/07T G06K7/00E G06K7/10A3C H01Q1/38 H01Q7/00 H02J5/00T H02J7/02B1 H04B5/00P4 H04B5/02 T02J17/00 T02J7/00C6 T04B5/00P2

US class: 1/1 307/104 307/104P 307/104S 307/149 307/149S 307/31 307/9.1 307/9.100P 320/107 320/107P 320/108 320/108P 320/108S 320/137 320/137P 320/166 320/166S 323/318 323/318P 340/539.3 340/539.300P 340/636.1 340/636.100P 340/693.1 340/870.37 343/850 343/850S 343/867 343/867S 455/13.4 455/193.2 455/41.1 455/41.100P 455/41.100S 455/572 455/67.15 455/7 455/7P

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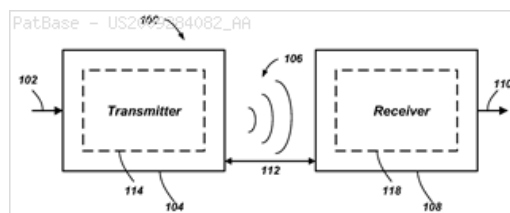
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Abstract:

Exemplary embodiments are directed to wireless power transfer. Antenna circuits use negative resistance to offset resistance from other elements in the circuit. The antenna circuits include an antenna for coupling with a near field radiation at a resonant frequency and a capacitance element connected in series with the receive antenna. The antenna circuits also include a negative resistance generator connected in series with the capacitance element. In the case of a receive antenna, and possibly a repeater antenna, a load is connected in series with the negative resistance generator. The load may draw power from the near field radiation when the antenna circuit oscillates near the resonant frequency. In the case of a transmit antenna, a signal generator is coupled in series with the antenna for applying signal power to the antenna circuit to generate an electromagnetic field at the resonant frequency creating a coupling-mode region within a near field.



3) Family number: 48742086 (US2011084659A)

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Title: MOBILE CART DOCKING AND COMMUNICATION SYSTEM

Priority: US20090249979P 20091008 US20100899544 20101007

Family:	Publication number	Publication date	Application number	Application date
	US2011084659 AA	20110414	US20100899544	20101007

Probable Assignee: POWER OTG INC

Assignee(s):(std): POWER OTG INC

Inventor(s):(std): NIEMANN KARL CHRISTOPHER ; HEYD ANDREW RUDOLPH ; MORRIS CHARLES POWELL ; ASHMORE PAUL ANDREW ; SOBELEWSKI ZBIGNIEW STANISLAW

International class (IPC 8-9): H02J7/00 (Advanced/Invention)

CPC: H02J7/0042

European class: H02J7/00E

US class: 320/109 320/109P

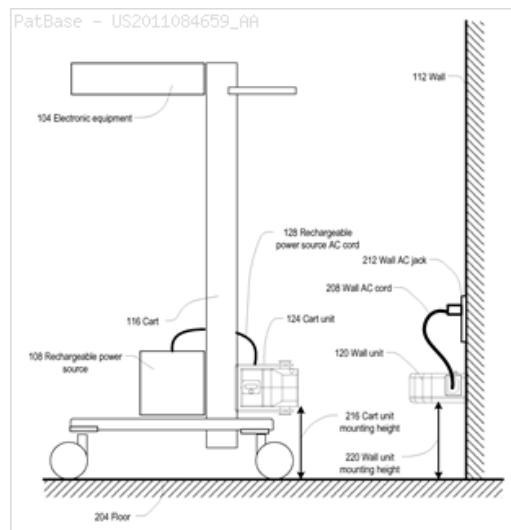
[Classification Explorer](#)

Cited documents: US7741808 BB, US7591786 BB, US7570994 BB, US7348883 BB, US7316648 BB, US7243386 BB, US7009840 BB, US6721178 BA, US6493220 BA, US5773954 A, US2011191265 AA, US2010283426 AA, US2010145535 AA, US2010085694 AA, US2009212671 AA, US2008231228 AA, US2008084147 AA, US2008066979 AA, US2007283492 AA, US2006096028 AA, US2005272372 AA, US2005033124 AA,

Forward Citations: WO14168732, US2016211695, US2015229148, US10439422,

Abstract:

A power and communication system for a mobile cart is provided. The system includes a wall unit, which includes a processor and a power circuit. The power circuit receives external power and provides switched AC power to the cart unit when the wall unit is engaged with the cart unit and the processor enables the power circuit. The system also includes a cart unit. The cart unit includes a memory device storing a signature. The memory device is coupled to the processor when the wall unit is engaged with the cart unit. The processor detects continuity when the wall unit is engaged with the cart unit, and in response, the processor reads the signature. The processor enables the power circuit if the signature is a valid signature, and disables the power circuit if the signature is invalid. The switched AC power recharges a rechargeable power source of the mobile cart.



4) Family number: 61539117 (US2016023675A)

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Title: MONITORING USAGE OR STATUS OF CART RETRIEVERS
Priority: US20140029347P 20140725 US20150808971 20150724 WO2015US42096 20150724
US20160215375 20160720

Family:	Publication number	Publication date	Application number	Application date
	CA2955623 AA	20170118	CA20152955623	20150724
	CN106573633 A	20170419	CN201580040998	20150724
	CN106573633 B	20181116	CN201580040998	20150724
	EP3172109 A2	20170531	EP20150825007	20150724
	EP3172109 A4	20180523	EP20150825007	20150724
	US2016023675 AA	20160128	US20150808971	20150724
	US2017101120 AA	20170413	US20160215375	20160720
	US9403548 BB	20160802	US20150808971	20150724
	US10124821 BB	20181113	US20160215375	20160720
	WO16015000 A2	20160128	WO2015US42096	20150724
	WO16015000 A3	20160519	WO2015US42096	20150724

Probable Assignee: GATEKEEPER SYSTEMS INC
Assignee(s):(std): GATEKEEPER SYSTEMS INC
Assignee(s): JAMES JESSE M ; HANNAH STEPHEN E ; BMO HARRIS BANK NA ; CARTTRONICS LLC ; EKBOTE CHANDRASHEKHAR ; FIRST MERCHANTS BANK
Inventor(s):(std): JAMES JESSE M ; HANNAH STEPHEN E ; EKBOTE CHANDRASHEKHAR
Agent(s): SMART AND BIGGAR; FENNELL GARETH CHARLES; KNOBBE MARTENS OLSON AND BEAR LLP; ALTMAN DANIEL E
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
International class (IPC 8-9): B32B3/14 B60L11/18 B60L15/40 B62B3/00 B62B3/14 B62B5/00 G05D1/00 G05D1/02 G06F19/00 G07C5/08 (Advanced/Invention); G07C5/00 (Advanced/Non-invention)
CPC: B62B5/0076 G07C5/085 G05D1/0016 G05D1/0022 G05D1/028 B62B5/0033 B62B3/14 B60L2240/70 G05D1/0011 G05D2201/0216 G07C5/008 Y02T10/7005 Y02T10/7072 Y02T10/7291 Y02T90/121 Y02T90/128 Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/169 Y04S30/14 B60L53/65 B60L58/12
US class: 1/1 701/2 701/22

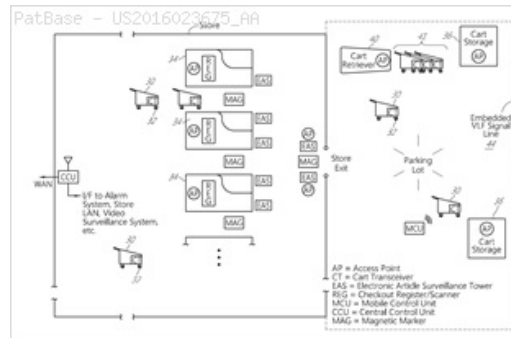
[Classification Explorer](#)

Cited documents: WO16015000 A2, WO16015000 A1, US9403548 BB, US9205702 BB, US9091551 BB, US9010771 BB, US8997905 BB, US8973716 BB, US8894086 BB, US8820447 BB, US8751148 BB, US8718923 BB, US8700230 BA, US8684373 BB, US8674845 BB, US8606501 BB, US8578984 BB, US8571778 BB, US8570171 BB, US8558698 BA, US8478471 BB, US8473192 BB, US8463540 BB, US8433507 BB, US8417445 BB, US8406993 BB, US8360459 BB, US8046160 BB, US7944368 BB, US7810612 BB, US7740114 BB, US7658247 BB, US7571914 BB, US7549651 BB, US7533742 BB, US7496532 BB, US7493979 BB, US7474218 BB, US7420461 BB, US7397373 BB, US7395886 BB, US7389836 BB, US7277010 BB, US7218225 BB, US7199709 BB, US7183910 BB, US7084765 BB, US7053823 BB, US7034695 BB, US6971464 BB, US6945366 BB, US6928343 BB, US6911908 BA, US6894614 BB, US6880652 BB, US6867694 BB, US6700493 BA, US6529164 BA, US6446005 BA, US6362728 BA, US6244366 BA, US6220379 BA, US6127927 A, US6125972 A, US6070679 A, US6024655 A, US5934694 A, US5877962 A, US5831530 A, US5719555 A, US5610586 A, US5598144 A, US5557513 A, US5512879 A, US5439069 A, US5315290 A, US2015344055 AA, US2015325093 AA, US2015239290 AA, US2015197266 AA, US2014350851 AA, US2014250627 AA, US2014125019 AA, US2014070004 AA, US2014062062 AA, US2013264786 AA, US2013257000 AA, US2012320199 AA, US2011087497 AA, US2010078905 AA, US2009179760 AA, US2009076895 AA, US2009063176 AA, US2009037040 AA, US2008315540 AA, US2008309389 AA, US2008225879 AA, US2007289787 AA, US2007096899 AA, US2007055415 AA, US2006279421 AA, US2006244588 AA, US2006136303 AA, US2005098364 AA, US2005075785 AA, US2005049914 AA, US2005021710 AA, US2004243262 AA, US2004215532 AA, US2004130457 AA, US2003206102 AA, US2003043073 AA, US2002161651 AA, US2002016674 AA, US2001028301 AA, US2001017588 AA, CN201951502 U,
Forward Citations: WO18129362, WO17223148, US9994434, US9989756, US9963162, US9914470, US9908760,

US9896315, US9875503, US9875502, US9845072, US9801517, US9783218, US9758185, US9757002, US9676405, US9669659, US9630639, US9403548, US2017287323, US2016259339, US2016259331, US10435279, US10358326, US10351400, US10351399, US10346794, US10336592, US10315897, US10315679, US10287149, US10280054, US10239740, US10239739, US10239738, US10227082, US10219136, US10214400, US10204511, US10196040, US10189692, US10189691, US10189494, US10138100, US10130232, US10124821, US10118635, US10081525, US10071893, US10071892, US10071891, US10023216, US10017322, GB2542473, GB2542473, FR3065429, FR3064761, FR3052262, FR3052262, EP3382488, EP3255442, CN108945068,

Abstract:

Examples of systems and methods for controlling or monitoring a fleet of human-propelled, wheeled carts and cart retrievers are described. The carts can be shopping carts at a retail facility, and the cart retrievers can be used to collect and return the shopping carts from a parking lot near the facility to a cart collection area. The carts or cart retrievers can monitor various status or usage parameters (such as retriever battery charge, cart collection trip speed, cart collection path or duration, etc.) and transmit the parameters to a central control unit. The central control unit can analyze and process the status or usage parameters. The system can provide a user interface for access to the status or usage parameters of the cart and cart retriever fleet.



5) Family number: 51065154 (US2012110810A)

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Title: MEDICAL DEVICE WITH FEATURE FOR STERILE ACCEPTANCE OF NON-STERILE REUSABLE COMPONENT

Priority:	US20100410603P	20101105	US20110487846P	20110519	US20110151509	20110602
	US20110151488	20110602	US20110151471	20110602	US20110151498	20110602
	US20110151481	20110602	US20110151503	20110602	US20110151512	20110602
	US20110275495	20110602	US20110269870	20111010	US20110270701	20111011
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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HK HL HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): A61B17/00 A61B17/064 A61B17/068 A61B17/12 A61B17/28 A61B17/285 A61B17/29 A61B17/295 A61B17/32 A61B17/94 A61B18/00 A61B18/04 A61B18/12 A61B18/14 A61B18/18 A61B19/00 A61B19/02 A61B34/00 A61B34/30 A61B46/10 A61B50/30 A61B8/00 A61B8/14 A61B90/00 A61B90/40 A61F9/02 A61N7/00 B23B37/00 B23Q3/00 B23Q5/00 B25B27/14 B65D83/10 B65D85/00 B65D85/86 G01R31/00 G02B27/00 G02B27/01 G06Q30/04 G06Q30/06 G06Q50/22 G07C1/00 G08B21/00 G16H20/40 G16H40/63 H01M10/46 H01M10/48 H01M10/50 H01M2/10 H01M2/26 H02J17/00 H02J7/00 H02J7/02 H04R31/00 (Advanced/Invention); A61B17/00 A61B17/064 A61B17/28 A61B17/285 A61B17/29 A61B18/00 A61B18/04 A61B18/12 A61B19/00 A61B34/00 A61B34/30 A61B90/00 A61B90/40 G02B27/00 H01M2/10 H01M2/26 H02J7/00 (Advanced/Non-invention)

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US class: 1/1 173/46 173/46P 2/431 2/431S 206/370 206/723 206/723S 29/271 29/271P 29/271S 29/464 29/464P 29/594 29/594S 320/107 320/107P 320/107S 320/108 320/108P 320/113 320/137 320/137S 340/540 340/540S 340/635 340/635S 340/636.1 340/636.100S 429/120 429/120P 429/121 429/121P 601/2 601/2P 606/1 606/169 606/169P 606/169S 606/1P 606/1S 606/27 606/32 606/33 606/33P 606/33S 606/34 606/34S 606/41 606/41P 606/41S 606/45 606/45P 606/51 606/52

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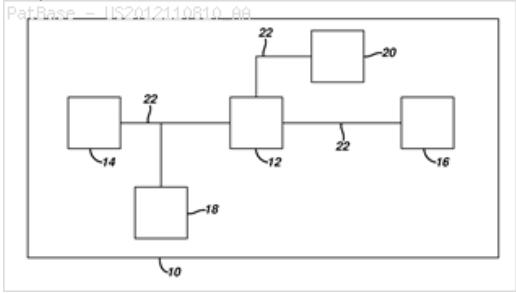
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Abstract:

An apparatus maintains the sterility of a medical device while providing for the insertion of an insertable component into the medical device. The apparatus includes a medical device having a housing sized to contain the insertable component, an active feature, a cap, and a hinge member. A container encases the medical device within a device recess, a cap recess, and a container cover. The insertable component may be inserted into the housing while limiting potential contact with the exterior of the medical device. An alternative assembly comprises an insertion assembly having a handle and the insertable component detachably attached thereto. The medical device comprises a housing, an active feature, and a flexible member. An insertion tube is insertable within the flexible member to limit contact when the insertable component is inserted into the housing. Yet

another configuration includes a resiliently hinged door assembly releasable by a release button.



6) Family number: 49158162 (US2011162896A) © PatBase

Title: MODE OF TRANSPORTATION TYPE HAVING INNER-MOTORIZED OMNIWHEEL APPARATUS AND METHOD OF CONTROL

Priority: US20100655569 20100104 US20130858109 20130408 US20160054136 20160226

Family:	Publication number	Publication date	Application number	Application date
	US2011162896 AA	20110707	US20100655569	20100104
	US2013277128 AA	20131024	US20130858109	20130408
	US2016264021 AA	20160915	US20160054136	20160226
	US8430192 BB	20130430	US20100655569	20100104

Probable Assignee: GILLETT CARLA

Assignee(s):(std): GILLETT CARLA ; GILLETT CARLA R

Inventor(s):(std): GILLETT CARLA R ; GILLETT CARLA

International class (IPC 8-9): B60K1/00 B60K26/00 B60K7/00 B60L8/00 B60N2/02 B60N2/14 B60W50/08 B62D61/00 G05D1/00 H04M1/725 (Advanced/Invention)

CPC: B60K1/04 B60K17/30 B60K17/356 B60K37/06 B60K2001/0416 B60K2001/0444 B60K2007/0038 B60K2007/0092 B60K2016/006 B60L8/00 B60L8/003 B60L8/006 B60L2200/12 B60L2200/28 B60L2220/44 B60L2250/16 B60Y2200/12 B60Y2200/145 B60Y2200/148 B60Y2200/45 B60Y2200/81 B60Y2200/91 Y02T10/7005 Y02T10/705 Y02T10/7083 Y02T10/90 B60L2200/26 B60N2/0232 B60N2/14 G05D1/0088 B60W50/082 H04M1/72533 H04M1/7253 B60N2002/024 B60K7/0007 F03D9/25 B60L50/66 B60K2370/77

European class: B60K1/04 B60K16/00 B60K17/30 B60K17/356 B60K37/06 B60K7/00E B60L11/18M36 B60L8/00 B60L8/00B B60L8/00D L60K1/04A15 L60K1/04A3 L60K16/00B L60K350/92L L60K7/00R L60K7/00W L60L200/12 L60L200/26 L60L200/28 L60L220/44 L60L250/16 L60Y200/12 L60Y200/145 L60Y200/148 L60Y200/45 L60Y200/81 L60Y200/91 Y02T10/70B Y02T10/70H4 Y02T10/70J2B Y02T10/90

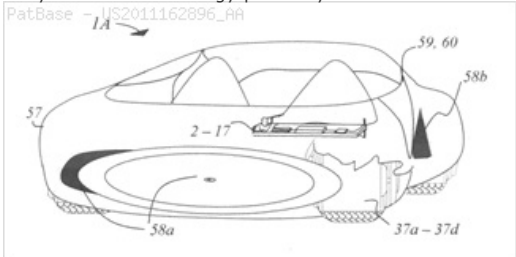
US class: 1/1 180/2.2 180/2.200P 180/21 180/21S 180/315 180/315S 180/408 180/65.51 701/23

[Classification Explorer](#)

Cited documents: US962308 A, US8280561 BB, US8269447 BB, US8108104 BB, US8073585 BB, US8025551 BB, US7980335 BB, US7934572 BB, US7789175 BB, US7748490 BB, US7460941 BB, US7426970 BB, US7204328 BB, US7137470 BB, US7056185 BA, US6367571 BA, US5690185 A, US5643041 A, US5533921 A, US5439408 A, US4599030 A, US4223753 A, US3789947 A, US3016967 A, US2012006602 AA, US2010147609 AA, US2008066979 AA, US2004112656 AA, US2004079560 AA, US2002175009 AA,

Forward Citations: WO19068405, WO19056046, USD784853, US9995284, US9994434, US9987927, US9973609, US9952590, US9950243, US9908760, US9896315, US9886032, US9875503, US9875502, US9864396, US9841758, US9836046, US9829882, US9827487, US9801517, US9791858, US9789840, US9780435, US9766620, US9764741, US9757002, US9744932, US9738179, US9724829, US9701323, US9646356, US9534906, US9481410, US9457730, US9429940, US9342073, US9314929, US9314928, US9228563, US9211920, US9193404, US9097538, US9090214, US8775001, US2018036185, US2017267204, US2017015319, US2016159251, US2015260154, US2015179071, US2013218380, US2012293109, US2012222536, US2010242672, US2008277391, US10477007, US10476130, US10474154, US10471804, US10466057, US10452077, US10435279, US10423155, US10414290, US10379532, US10377342, US10369872, US10358326, US10351400, US10351399, US10346794, US10343642, US10336592, US10315897, US10308134, US10303181, US10299216, US10289922, US10287149, US10286908, US10282625, US10281915, US10274950, US10268192, US10255648, US10252641, US10248118, US10245517, US10240938, US10239740, US10239739, US10239738, US10223844, US10214400, US10214229, US10192310, US10189692, US10189691, US10168701, US10155548, US10150358, US10138100, US10130232, US10099379, US10081525, US10071893, US10071892, US10071891, US10056791, US10050330, US10022643, US10017322, US10012985, KR20180042635, KR101875721, DE102017200194, DE102014207033, CN106357914,

Abstract: A mode of transpiration type employing a plurality of inner-motorized omniwheel apparatus comprising at least one electric motor or an ignited fueled motor, and supported by a zero degree rotating motorized yoke having hydraulic actuation, and managed by control system modes that enables a said vehicle type to transport an operator, a passenger and cargo in any given manner, and powered by a battery array that is charged by an electrical grid source, and by a renewable energy power system.



7) Family number: 56830268 (US2014183974A)

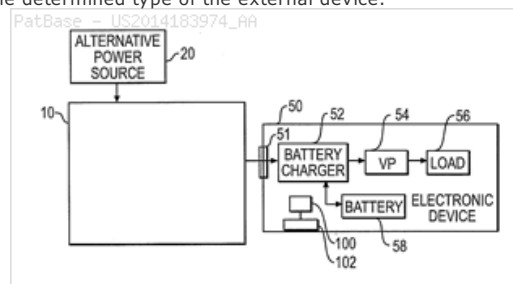
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Title: UNIVERSAL POWER INTERFACE**Priority:** US20120728268 20121227 WO2013US61723 20130925

Family:	Publication number	Publication date	Application number	Application date
	EP2939076 A1	20151104	EP20130866897	20130925
	EP2939076 A4	20160727	EP20130866897	20130925
	KR101654780 B1	20160906	KR20157013082	20130925
	KR20150072447 A	20150629	KR20157013082	20130925
	TW201439740 A	20141016	TW20130147745	20131223
	TWI559122 B	20161121	TW20130147745	20131223
	US2014183974 AA	20140703	US20120728268	20121227
	US9287702 BB	20160315	US20120728268	20121227
	WO14105235 A1	20140703	WO2013US61723	20130925

Probable Assignee: INTEL CORP**Assignee(s):(std):** HUANG LILLY ; INTEL CORP ; PROEFROCK WAYNE L ; RAVICHANDRAN KRISHNAN**Inventor(s):(std):** PROEFROCK WAYNE L ; HUANG LILLY ; RAVICHANDRAN KRISHNAN**Agent(s):** JENNINGS VINCENT LOUIS; KED AND ASSOCIATES LLP; OREN DAVID C**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**International class (IPC 8-9):** G06F1/26 H01H47/00 H02J1/00 H02J1/06 H02J1/10 H02J7/00 H02J7/35 (Advanced/Invention); H02J7/00 (Advanced/Non-invention)**CPC:** H02J1/06 G06F1/266 G06F2213/0042 H02J7/35 H02J2007/0062 Y10T307/747 Y10T307/858 H02J1/10 H02J7/0055 H02J2001/008**US class:** 1/1 307/113 307/130[Classification Explorer](#)**Cited documents:** WO14105235 A1, US8903456 BB, US8773077 BA, US8587251 BB, US8581550 BB, US8482260 BB, US8450980 BB, US8400162 BA, US8368345 BB, US8339105 BB, US8242742 BB, US8174313 BB, US8120312 BB, US7893657 BB, US7870916 BB, US7790307 BB, US7759906 BB, US7698575 BB, US7622898 BB, US7615965 BB, US7573235 BB, US7560829 BB, US7535122 BB, US7514900 BB, US7498769 BA, US7446434 BA, US7432685 BB, US7425815 BB, US7030517 BB, US7023180 BB, US6448742 BA, US6392384 BA, US6271643 BA, US6222370 BA, US5640076 A, US5548200 A, US2014184160 AA, US2014062395 AA, US2014056041 AA, US2014001849 AA, US2013290743 AA, US2012280648 AA, US2012197341 AA, US2012187897 AA, US2012176078 AA, US2012098350 AA, US2012091968 AA, US2012021807 AA, US2011138197 AA, US2011133700 AA, US2011109261 AA, US2011062913 AA, US2011029703 AA, US2011029703, US2010070659 AA, US2009212222 AA, US2009128086 AA, US2006256989 AA, US2005141154 AA, US2003057920 AA, US2001034807 AA, TW200739330 A, KR20070109569 A, KR20070109569, KR101170079 B1, JP2005215983 A2, JP2005117768 A2, JP2005117768, JP2002084756 A2, JP2001306495 A2, JP2001306495, EP2402864 A2,**Forward Citations:** WO17053054, US9891680, US9791906, US9665150, US9601938, US9590451, US9287702, US2016139642, US2015346794, US2015097514, US2015008872, US2014208134, US10331607, US10326293, US10320128, TWI526803, EP3367211, EP3367210, EP3065027, EP3065027, CN107408825,**Abstract:**

An electronic device is provided that may include an input port to couple to an external device, and a universal power interface to determine a type of the external device connected to the input port based at least on a voltage of a voltage supply line. The universal power interface may provide a power delivery path based on the determined type of the external device.

**8) Family number: 60600374** (US2015298765A)

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Title: JOINT MOVEMENT DETECTION DEVICE AND SYSTEM FOR COORDINATING MOTOR OUTPUT WITH MANUAL WHEELCHAIR PROPULSION**Priority:** US20140980552P 20140416 US20150681080 20150407 US20160212282 20160717

Family:	Publication number	Publication date	Application number	Application date
	US2015298765 AA	20151022	US20150681080	20150407
	US2016361213 AA	20161215	US20160212282	20160717
	US9498395 BB	20161122	US20150681080	20150407
	US9597242 BB	20170321	US20160212282	20160717

Probable Assignee: GOLDEN JR STEPHEN C**Assignee(s):(std):** GOLDEN JR STEPHEN C**Inventor(s):(std):** GOLDEN JR STEPHEN C

International class (IPC 8-9): A61G5/02 A61G5/04 A61G5/10 A61G5/12 A61H3/00 B62M6/50 (Advanced/Invention); A61B5/00 A61G5/04 B62M23/02 B62M6/40 B62M6/60 B63H1/14 B63H16/04 B63H21/17 G01L5/16 G08C17/00 H02P31/00 (Advanced/Non-invention)

CPC: A61B5/4528 A61B5/6824 A61G2203/30 A61G2005/048 A61G5/04 A61G5/12 A61G5/021 A61G2005/128 A61G2005/122 A61G2005/1054 A61G5/047 A61G5/10 A61H3/00 B62M6/40 B62M6/60 B62M23/02 B63H1/14 B63H16/04 B63H21/17 G01L5/16 G08C17/00 H02P31/00 A61G5/048

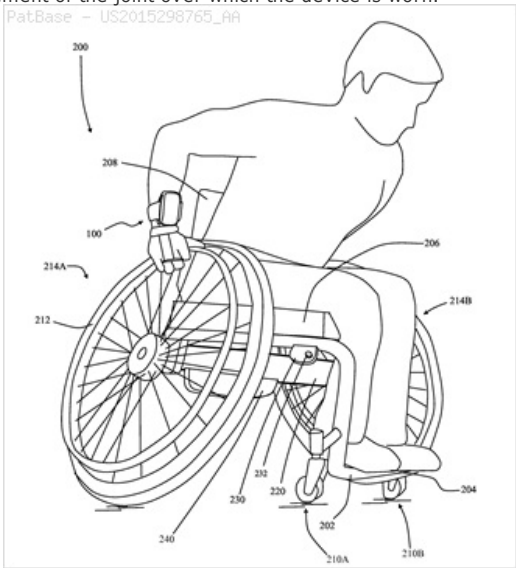
US class: 1/1 180/206.3 701/22

[Classification Explorer](#)

Cited documents: WO13155112 A1, WO12118263 A1, WO10030822 A1, WO08036087 A1, WO05058685 A1, USD583104 S1, US8572764 BB, US8567547 BB, US8500143 BB, US8482412 BB, US8337266 BB, US8306673 BA, US8292678 BB, US8280561 BB, US8244655 BB, US8109529 BB, US7918697 BB, US7840327 BB, US7837210 BB, US7832515 BB, US7791309 BB, US7261309 BB, US6946650 BB, US6731086 BB, US6724165 BB, US6217398 BA, US6112837 A, US6059062 A, US6050357 A, US5910714 A, US5656001 A, US4422515 A, US4410060 A, US4050533 A, US2015265490 AA, US2015173993 AA, US2015142130 AA, US2015025423 AA, US2014336781 AA, US2014262575 AA, US2013300662 AA, US2013274635 AA, US2013261871 AA, US2013197408 AA, US2013035010 AA, US2013019700 AA, US2013008732 AA, US2012279789 AA, US2011266082 AA, US2011201238 AA, US2011061697 AA, US2011023920 AA, US2010280629 AA, US2010026484 AA, US2009095552 AA, US2008129099 AA, US2008065291 AA, US2008009771 AA, US2006187196 AA, US2006167564 AA, US2006079817 AA, US2005271279 AA, US2005195166 AA, US2005006158 AA, US2004243025 AA, US2003163287 AA, US2002036105 AA, DE19848530 C1,

Forward Citations: WO18017436, WO17100898, US9795524, US2018049930, US2013340343, US10434030, US10427293, US10322043, US10278883, US10236801, US10167051, US10052246, TWI643609, CN106963570, CN106963570,

Abstract:
A joint movement detection device and system is presented which is responsive to elbow or wrist movements during use of a manually-propelled wheelchair to enable coordination of assistive motor energization with a user's efforts at self-motivating the manually-propelled wheelchair during driving, steering, and braking of the wheelchair. Additional means are disclosed which help to ensure user-intended assistive motor output that is responsive to movement of the joint over which the device is worn.



9) Family number: 65128491 (US2017067981A)

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Title: MAGNETOMETER AND ACCELEROMETER CALIBRATION FOR CART NAVIGATION SYSTEM

Priority: US20150214579P 20150904 US20160255530 20160902

Family:

Publication number	Publication date	Application number	Application date
US2017067981 AA	20170309	US20160255530	20160902
US10001541 BB	20180619	US20160255530	20160902

Probable Assignee: GATEKEEPER SYSTEMS INC

Assignee(s):(std): GATEKEEPER SYSTEMS INC

Assignee(s): BMO HARRIS BANK NA

Inventor(s):(std): CARTER SCOTT J ; HANNAH STEPHEN E

Agent(s): KNOBBE MARTENS OLSON AND BEAR LLP

International class (IPC 8-9): G01C25/00 G01P21/00 G01R35/00 (Advanced/Invention)

CPC: G01R35/005 G01P21/00 G01C25/00 G01P15/18 B62B5/0096 G01C17/38

US class: 1/1 324/202

[Classification Explorer](#)

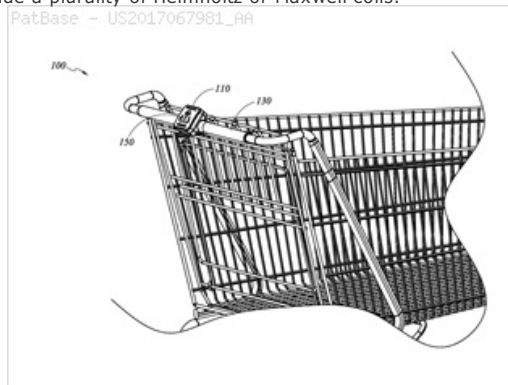
Cited documents: WO17041045 A1, WO16144709 A1, WO13009465 A1, WO0171372 A2, US9731744 BB, US9669659 BB, US9630639 BB, US9606238 BB, US9164176 BB, US9116234 BB, US8820447 BB, US8779729 BB, US8558698 BA, US8463540 BB, US8046160 BB, US8018376 BB, US7999733 BB, US7944368 BB, US7918190 BB, US7880676 BB, US7658247 BB, US7656291 BB, US7616682 BB, US7463189 BB, US7254402 BB, US7199709 BB, US7053823 BB, US6928343 BB, US6859761 BB, US6725159 BB, US6701253 BB, US6693586 BA, US6617972 BB, US6603978 BA, US6567041 BA, US6502669 BA, US6473030 BA, US6446005 BA, US6437734 BA, US6415154 BA, US6313786 BA, US6271757 BA, US6271755 BA, US6249245 BA, US6243648 BA, US6229478 BA, US6204772 BA, US6201497 BA, US6161849 A, US6150980 A, US6121928 A, US6102414 A, US6097337 A, US6067046 A, US6054923 A, US6043748 A, US6024655 A, US5936573 A, US5900825 A, US5868100 A, US5841396 A, US5823302 A, US5781156 A, US5739786 A, US5719555 A, US5663734 A, US5638077 A, US5610586 A, US5598144 A,

US5446656 A, US5438319 A, US5420592 A, US5379224 A, US5357182 A, US5315290 A, US5311194 A, US5283550 A, US5247440 A, US5225842 A, US5194844 A, US5119102 A, US4949268 A, US4628454 A, US4242668 A, US2016259061 AA, US2016091317 AA, US2015325103 AA, US2015177020 AA, US2014306843 AA, US2014232601 AA, US2014195104 AA, US2014131510 AA, US2012277992 AA, US2012249325 AA, US2012098518 AA, US2011211521 AA, US2010321185 AA, US2010161179 AA, US2009322600 AA, US2009050441 AA, US2009040103 AA, US2008158013 AA, US2008122227 AA, US2008074260 AA, US2007240903 AA, US2007058700 AA, US2006247847 AA, US2006244588 AA, US2006125694 AA, US2006082498 AA, US2005259240 AA, US2005060069 AA, US2004166873 AA, US2004160365 AA, US2004102896 AA, US2004051263 AA, US2004031650 AA, US2002196151 AA, US2002178085 AA, US2002050944 AA, US2001048387 AA,

Forward Citations: WO19020955, US9731744, US10422474, US10232869, US10101458,

Abstract:

A wheeled object (e.g., a human-propelled cart such as a shopping cart) can include a navigation system that uses dead reckoning to determine the position of the wheeled object. The navigation system can include a magnetometer and an accelerometer and may be disposed on a handle of the wheeled object. Examples of a system for calibrating the magnetometer and accelerometer during manufacture as well as during installation on the wheeled object are disclosed. The calibration includes calibrating for the soft iron distortion induced at the navigation system by the ferromagnetic shopping cart handle (or other ferromagnetic portions of the cart such as the frame) and hard iron distortions induced by nearby magnetic sources (e.g., a permanent magnet in an audio speaker). The calibration system can include a plurality of Helmholtz or Maxwell coils.



10) Family number: 50788644 (US2012062187A)

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Title: AUXILIARY POWER DEVICE, MEMORY SYSTEM HAVING THE SAME, AND CELL BALANCING METHOD THEREOF

Priority: KR20100089613 20100913 US20100382606P 20100914 US20110217962 20110825

Family:	Publication number	Publication date	Application number	Application date
	KR101750055 B1	20170622	KR20100089613	20100913
	KR20120027822 A	20120322	KR20100089613	20100913
	US2012062187 AA	20120315	US20110217962	20110825
	US9252603 BB	20160202	US20110217962	20110825

Probable Assignee: SAMSUNG ELECTRONICS CO LTD

Assignee(s):(std): SAMSUNG ELECTRONICS CO LTD ; SHIM HOJUN

Assignee(s): SAMSUNG ELECTRONICS CO

Inventor(s):(std): SHIM HOJUN ; SHIM HO JUN

Agent(s): EIPG PLLC

International class (IPC 8-9): G06F13/12 G11C11/4074 G11C11/413 G11C16/30 G11C5/14 H02H3/10 H02J7/00 H02J7/34 (Advanced/Invention); H02J7/34 (Advanced/Non-invention)

CPC: H02H3/10 H02J7/0016 H02J7/345 G11C5/14 G06F13/12 G11C11/4074 G11C11/413 G11C16/30

US class: 1/1 320/166 320/166S 320/167 320/167P

[Classification Explorer](#)

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Forward Citations: WO18237320, US9923247, US9882401, US9847654, US9658669, US9331497, US9219367, US9024592, US2017166078, US2017084332, US2016061905, US2014239898, US2013328530, US2012268080, US10446194, US10270266, US10263436, US10254350, US10153521, US10122186, US10050518, US10040363, US10018680,

Abstract:

An auxiliary power device includes an auxiliary power source having first and second charging cells connected in series, a cell balance circuit configured to sense a charging voltage between the first and second charging cells, generate a balance voltage based on the sensed charging voltage, and applies the generated balance voltage between the first and second charging cells, and a microprocessor configured to diagnose the first and second charging cells based on the sensed charging cells and control the cell balance circuit.

