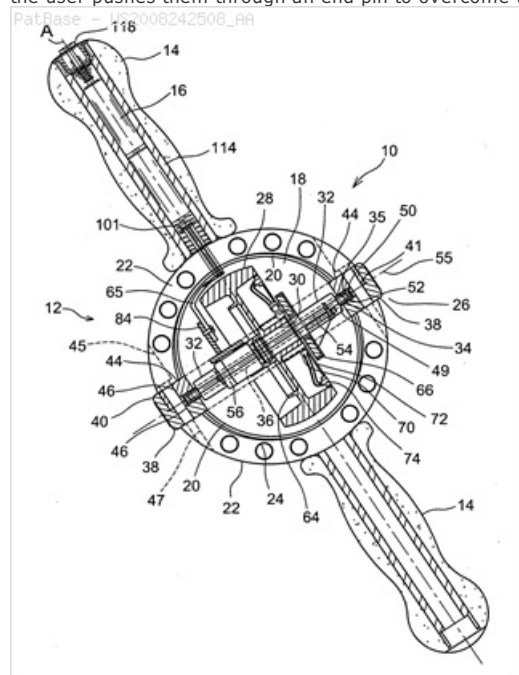


1) Family number: 42235878 (US2008242508A)

Title: GYROSCOPIC TOTAL EXERCISER

Abstract:

Source: US2008242508A A gyroscopic exercise device has a pair of handles attached to a housing. A user holds and rotates the handles along cone-like paths causing precession of a rotor, which is rotating about its spin axis, to provide resistance to the user. The device has an axle disc that holds ends of an axle of the rotor. The periphery of the axle disc and the ends of the rotor axle are within a circular race in the housing. A motor attached to the axle disc has a wheel for rotating the rotor about a spin axis by a temporary supply of power from included batteries in one of the handles. The batteries are in between two opposite springs in one of the handles and normally biased away from an electrical contact until the user pushes them through an end pin to overcome the bias.



International class (IPC 8-9): A63B21/00 A63B21/015 A63B21/072 A63B21/22 A63B22/08 A63B22/10 A63B23/035 A63B23/04 A63B23/10 A63B23/14 F02N3/02 G01C19/00 G01C19/02 G01C19/06 G01C19/08 G01C19/18 (Advanced/Invention);

A63B21/22 A63B23/035 (Advanced/Non-invention);

A63B21/00 A63B21/012 A63B21/06 A63B22/06 A63B23/035 G01C19/00 (Core/Invention)

CPC: A63B21/00069 A63B23/03508 Y10T74/1218 A63B21/222 A63B21/0004 A63B23/12 F02N3/02 A63B21/4043 A63B21/4035 A63B23/03525 A63B21/22

European class: A63B21/00D A63B21/22 F02N3/02 K63B21/22A3 K63B23/035A K63B23/12

US class: 482/110 482/110P 482/110S 482/139 482/139S 482/2 482/2P 482/44 482/45 482/92 74/5.22 74/5.220S

Family:

Publication number	Pub. date	Application number	App. date
AU2010202246 AA	20101223	AU20100202246	20100601
AU2010202246 BB	20150910	AU20100202246	20100601
CN101905073 A	20101208	CN201010178907	20100521
CN101905073 B	20130911	CN201010178907	20100521
DE602010003281 D1	20121220	DE201060003281T	20100317
EP2258452 A1	20101208	EP20100156767	20100317
EP2258452 B1	20121024	EP20100156767	20100317
ES2398072 T3	20130313	ES20100156767T	20100317
JP2008237897 A2	20081009	JP20080047435	20080228
JP2010279685 A2	20101216	JP20100084966	20100401
JP5633777 B2	20141203	JP20100084966	20100401
KR20080087660 A	20081001	KR20080018332	20080228
NZ585822 A	20110225	NZ20100585822	20100601
US2008242508 AA	20081002	US20080072776	20080228
US2009247375 AA	20091001	US20090455685	20090605
US2011177923 AA	20110721	US20110074334	20110329
US7563210 BB	20090721	US20080072776	20080228
US7935035 BB	20110503	US20090455685	20090605
US8579770 BB	20131112	US20110074334	20110329

Priority: US20070920250P 20070327; US20080072776 20080228; US20090455685 20090605; EP20100156767 20100317; US20110074334 20110329;

Cited documents: USD457922 S1, US7452307 BB, US7437961 BB, US7381155 BB, US7175573 BA, US7102258 BB, US7101315 BB, US7033304 BB, US6607420 BB, US6419544 BA, US6083076 A, US6053846 A, US5800311 A, US5353655 A, US5287832 A, US2564787 A, US2008242508 AA, US2007266805 AA, US2006070594 AA, US2005101454 AA, US2005101440 AA, TWM308777 Y, JP2008237897 A2, JP2008237897, EP1950413 A2, DE202007010179 U1

CN101230822 A,

Assignee(s): (std): DYNAFLEX INT INC ; DYNAFLEX INTERNAT INC ; DYNAFLEX INTERNATIONAL INC ; DYNAFLEX INTERNATL INC ; SMITH TOM ; LOGISTIC ENTPR INC

Assignee(s): LOGISTIC ENTERPRISES INC LAS VEGAS ; LOGISTIC ENTERPRISES INC

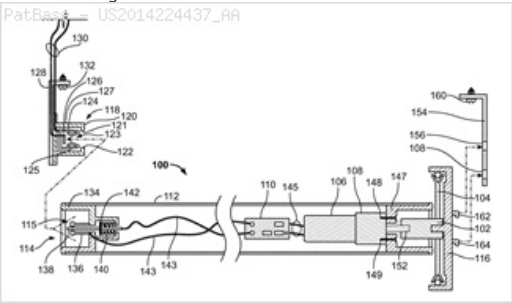
Inventor(s): (std): SMITH TOM ; TOM SMITH ; SMITH TOM FLOYD

Inventor(s): SMITH TOM ANAHEIM

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

2) Family number: 53486721 (US2014224437A)
Title: CONTROL OF ARCHITECTURAL OPENING COVERINGS

Abstract:
Source: US2014224437A Apparatus and methods for controlling architectural opening coverings are described herein. An example apparatus includes a roller tube, a motor including a motor drive shaft and a motor casing, the motor casing to rotate with the roller tube, and a manual control including a manual control drive shaft coupled to the motor drive shaft, the motor to apply torque to the roller tube through rotation of the motor casing.



International class (IPC 8-9): A47H5/00 A47H5/032 A47H5/32 E06B9/26 E06B9/262 E06B9/264 E06B9/32 E06B9/322 E06B9/34 E06B9/40 E06B9/42 E06B9/68 E06B9/72 E06B9/74 E06B9/78 F16H59/02 G05B7/00 (Advanced/Invention); E06B9/24 E06B9/26 E06B9/262 E06B9/68 E06B9/72 F16H59/02 (Advanced/Non-invention)
CPC: E06B2009/6845 F16H59/0278 E06B9/26 E06B9/32 E06B9/40 E06B9/68 E06B2009/6818 Y10T74/2014 E06B9/78 E06B9/264 E06B2009/785 E06B2009/2429 E06B2009/2627 E06B2009/6809 E06B2009/6854 E06B9/74 E06B9/72 E06B9/322 E06B9/42
US class: 1/1 160/10 160/291 160/310 160/311 74/473.3
Family:

Publication number	Pub. date	Application number	App. date
AU2012319161 AA	20130411	AU20120319161	20121003
AU2012319161 BB	20170608	AU20120319161	20121003
AU2012319162 AA	20130411	AU20120319162	20121003
AU2012319162 BB	20170309	AU20120319162	20121003
AU2017203472 AA	20170608	AU20170203472	20170524
AU2017225075 AA	20170928	AU20170225075	20170907
BR112014007887 A2	20170411	BR20141107887	20121003
BR112014007960 A2	20170411	BR20141107960	20121003
CA2850456 AA	20140328	CA20122850456	20121003
CA2850459 AA	20140328	CA20122850459	20121003
CL2014000823 A1	20140905	CL2014000823	20140403
CL2014000824 A1	20140829	CL2014000824	20140403
CN103889281 A	20140625	CN201280052208	20121003
CN103889281 B	20171020	CN201280052208	20121003
CN103890303 A	20140625	CN201280052000	20121003
CN103890303 B	20160824	CN201280052000	20121003
CN107762386 A	20180306	CN201710889537	20121003
CO7010790 A2	20140731	CO20140093536	20140502
CO7010791 A2	20140731	CO20140093599	20140502
EP2763572 A1	20140813	EP20120837714	20121003
EP2763572 A4	20151209	EP20120837714	20121003
EP2764193 A1	20140813	EP20120838703	20121003
EP2764193 A4	20151021	EP20120838703	20121003
IN00599MN2014 A	20150109	IN2014MN00599	20140402
IN00618MN2014 A	20150109	IN2014MN00618	20140404
JP2014529027 T2	20141030	JP20140533515T	20121003
JP2014531542 T2	20141127	JP20140533516T	20121003
JP6169577 B2	20170726	JP20140533516T	20121003
JP6310392 B2	20180411	JP20140533515T	20121003
KR20140071447 A	20140611	KR201470110944	20121003
KR20140085474 A	20140707	KR20147011476	20121003
MX2014003972 A1	20140512	MX20140003972	20121003
MX2014004050 A1	20140604	MX20140004050	20121003
MX344788 B	20170106	MX20140003972	20121003
US2014224437 AA	20140814	US20120349628	20121003
US2014290870 AA	20141002	US20120349629	20121003
US2016230460 AA	20160811	US20160133050	20160419
US2018002981 AA	20180104	US20170706608	20170915
US9334688 BB	20160510	US20120349628	20121003
US9765568 BB	20170919	US20120349629	20121003
WO13052083 A1	20130411	WO2012US00428	20121003
WO13052084 A1	20130411	WO2012US00429	20121003

Priority: US20110542760P 20111003; US20120648011P 20120516; AU20120319161 20121003; AU20120319162 20121003; CN201280052208 20121003; WO2012US00428 20121003; US20120349628 20121003; US20120349629 20121003; WO2012US00429 20121003; US20140349628 20140403; US20140349629 20140403; US20160133050 20160419; AU20170203472 20170524; AU20170225075 20170907; US20170706608 20170915;

Cited documents: WO11113094 A1, WO10011751 A1, WO0241740 A1, USD553079 S1, US9181750 BB, US8947027 BB, US8931541 BB, US8910695 BB, US8723454 BB, US8662139 BB, US8575872 BB, US8368328 BB, US8339086 BB, US8125167 BA, US8037922 BB, US7857033 BB, US7839109 BB, US7832450 BB, US7770961 BB, US7740045 BB, US7726379 BB, US7599612 BB, US7513292 BB, US7481133 BB, US7466090 BB, US7466090, US7264034 BB, US7261139 BB, US7240715 BB, US7240582 BA, US7234503 BB, US7161100 BA, US7134474 BB, US7089991 BB, US7028737 BB, US6979962 BB, US6843303 BB, US6843301 BB, US6810997 BB, US6751909 BB, US6733413 BB, US6680594 BB, US6628029 BB, US6571853 BA, US6497267 BA, US6381903 BA, US6346889 BA, US6259218 BA, US6244325 BA, US6196292 BA, US6186211 BA, US6181089 BA, US6181089 B1, US6158563 A, US6111376 A, US6104156 A, US6082433 A, US5975185 A, US5924949 A, US5860464 A, US5848634 A, US5839555 A, US5803150 A, US5799716 A, US5794381 A, US5793174 A, US5711360 A, US5711360, US5709349 A, US5675487 A, US5671387 A, US5663621 A, US5598000 A, US5547009 A, US5299678 A, US5105871 A, US5044417 A, US5039925 A, US4979603 A, US4972129 A, US4850414 A, US4842034 A, US4813468 A, US4807686 A, US4794715 A, US4766941 A, US4762159 A, US4712104 A, US4687038 A, US4673018 A, US4618804 A, US4560046 A, US4519554 A, US4519487 A, US4472910 A, US4417185 A, US4413665 A, US4372367 A, US4247744 A, US4112996 A, US4085345 A, US3965960 A, US3853167 A, US3825809 A, US3732914 A, US3186473 A, US2951920 A, US2878865 A, US2678094 A, US2276740 A, US2020595 A, US2015090409 AA, US2014290870 AA, US2014262078 AA, US2014262058 AA, US2014224437 AA, US2014133019 AA, US2014090787 AA, US2013199735 AA, US2013140130 AA, US2012200247 AA, US2011203754 AA, US2011203748 AA, US2011139380 AA, US2011073262 AA, US2011048655 AA, US2010279779 AA, US2010244602 AA, US2010236891 AA, US2010200176 AA, US2010191409 AA, US2010109850 AA, US2010073262 AA, US2010018654 AA, US2010006240 AA, US2009256021 AA, US2009173456 AA, US2009025888 AA, US2009005911 AA, US2008283200 AA, US2008231441 AA, US2008223532 AA, US2008052220 AA, US2008052034 AA, US2006086874 AA, US2006042765 AA, US2006042763 AA, US2005253710 AA, US2005173080 AA, US2005150608 AA, US2005099151 AA, US2005051283 AA, US2005035238 AA, US2004169940 AA, US2004169490 AA, US2004011477 AA, US2002190678 AA, US2002153854 AA, US2002011262 AA, US2002011262 AA, US1786512 A, US1725285 A, US1678790 A, JP8199950 A2, JP8199950, JP74774, JP7477, JP7000477 A2, JP622797, JP62002797 U1, JP62002797 U, JP62002797 B4, JP59230942 A2, JP5003594 U, JP5003594 U, JP253496, JP2053496 A2, JP2013520595 T2, JP2013520595, JP20062531, JP2006233418 A2, JP2006002531 A2, JP2005120760 A2, JP2005120760, JP2004237362 A2, JP2004190476 A2, JP2004027841 A2, JP2004027841, JP2002070465 A2, JP2002070465, JP1046961, JP10046961, JP10046961, EP2192249 A2, EP1659256 A2, EP0940553 A2, EP0838574 A2, EP0783072 A1, DE29818023 U1, DE29818023,

DE202011051106, CN2823518 Y, CN201943550 U, CN201202392 Y, CN1981311 A, CN1331945 A, CN102333469 A, AU2011229139 AA, AU2010901077,

Assignee(s): (std): HUNTER DOUGLAS ; HUNTER DOUGLAS INC 1 BLUE HILL PLAZA

Assignee(s): HUNTER DOUGLAS INC ; SWISZCZ PAUL ; JOHNSON WILLIAM ; HUNTER DOUGLAS INC1 BLUE HILL PLAZA ; BOHLEN JOERG ; COLSON WENDELL ; DANN KEVIN M ; FOGARTY DAN

Inventor(s): (std): BOHLEN JOERG ; COLSON WENDELL ; COLSON WENDELL B ; DAN FOGARTY ; DANN KEVIN M ; FOGARTY DAN ; FOGARTY DANIEL M ; JOERG BOHLEN ; JOHNSON WILLIAM ; KEVIN M DANN ; PAUL SWISZCZ ; PAUL SWIZCZ ; SWISZCZ PAUL ; SWISZCZ PAUL G ; WENDELL COLSON ; WILLIAM JOHNSON

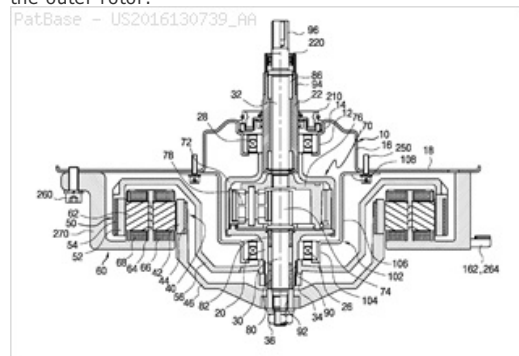
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3) Family number: 58293624 (US2016130739A)

Title: WASHING MACHINE DRIVING DEVICE, WASHING MACHINE HAVING SAME, AND CONTROL METHOD THEREFOR

Abstract:

Source: US2016130739A An apparatus for driving a washing machine in which a washing tub and a pulsator are driven separately to thereby form a variety of washing water flows includes: an outer shaft whose one end is connected to a washing tub; an inner shaft whose one end is connected to a pulsator; a planetary gear set that decelerates a rotational speed that is transferred via the inner shaft; first and second bearings that rotatably support the planetary gear set in two-way directions; and a washing machine motor for applying a rotational force to each of the outer shaft and the inner shaft. The washing machine motor includes: an outer rotor; an inner rotor; and a double stator that rotatably drives the outer rotor and the inner rotor independently, in which the output of the pulsator is accelerated or decelerated depending on the direction of rotation of the outer rotor.



International class (IPC 8-9): D06F33/02 D06F37/12 D06F37/30 D06F37/40 H02K16/00 H02K7/116 (Advanced/Invention)

CPC: D06F37/40 D06F33/02 D06F2202/065 D06F2204/065 D06F37/12 D06F37/304 Y02B40/52 H02K7/116 H02K16/02 D06F17/06 D06F37/269 D06F37/30

US class: 310/83 68/133 8/137

Family:

Publication number	Pub. date	Application number	App. date
CN105358755 A	20160224	CN201480037334	20140714
IN11597DN2015 A	20160506	IN2015DN11597	20151221
KR101619231 B1	20160511	KR20140088494	20140714
KR101639021 B1	20160713	KR20150148921	20151026
KR20150008347 A	20150122	KR20140088494	20140714
KR20150126330 A	20151111	KR20150148921	20151026
US2016130739 AA	20160512	US20150982571	20151229
WO15005752 A1	20150115	WO2014KR06336	20140714

Priority: KR20130082063 20130712; KR20140088494 20140714; WO2014KR06336 20140714; KR20150148921 20151026;

Cited documents: WO12169774 A2, KR20130074151 A, KR20130074151, KR20060020266 A, KR20060020266, KR20050001673 A, KR20040059602 A, KR20030077682 A, KR101140924 B1, KR100925428 B1, KR100925428 B1, KR100548310 B1, CN1743535 A, CN103051284 A, CN102877270 A, CN101675188 A,

Assignee(s): (std): AMOTECH CO LTD

Assignee(s): AMOTECH CO

Inventor(s): (std): AHN YOUN SOO ; SONG DUCK HYUN ; YOO SOO YEUB

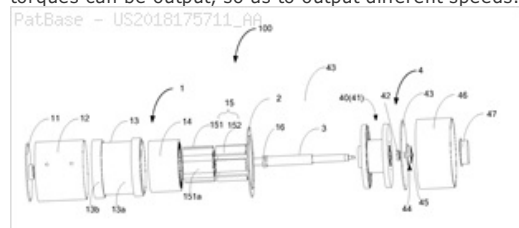
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4) Family number: 60367161 (US2018175711A)

Title: MULTI-ROTOR PERMANENT MAGNET SYNCHRONOUS MOTOR

Abstract:

Source: US2018175711A The present invention provides a multi-rotor permanent magnet synchronous motor, wherein the motor (100) includes a motor shaft (3) and the main mechanism (1) and the auxiliary mechanism (4) sleeved on the motor shaft (3) in turn which work in parallel; the auxiliary mechanism (4) comprises a one-way bearing body (3) sleeved on the motor shaft (41) and auxiliary rotor components (40) sleeved on the one-way bearing body (41). The multi-rotor permanent magnet synchronous motor in the present invention does not need a gear box to drive, and the energy consumption is low. Besides, through the coordinative work of the main structure and the auxiliary mechanism, different torques can be output, so as to output different speeds.



International class (IPC 8-9): H02K1/22 H02K16/02 H02K21/00 H02K21/02 H02K23/44 (Advanced/Invention)

CPC: H02K21/00 H02K16/02 H02K23/44 H02K1/22 H02K21/02

Family:

Publication number	Pub. date	Application number	App. date
CN104917346 A	20150916	CN201510342137	20150618
CN204696885 U	20151007	CN201520425445U	20150618
EP3312978 A1	20180425	EP20150895285	20150624
US2018175711 AA	20180621	US20150737315	20150624
WO16201712 A1	20161222	WO2015CN082170	20150624

Priority: CN201510342137 20150618; CN201520425445U 20150618; WO2015CN082170 20150624;

Cited documents: US4663581 A, US4654577 A, US2007273242 AA, KR100993353 B1, CN204696885 U, CN204408048 U, CN202602444 U, CN201515286 U, CN201298793 Y, CN200941582 Y, CN1508959 A, CN1292596 A, CN101030720 A,

Assignee(s): (std): GAM SHINE TECH CO LTD ; GAM SHING TECHNOLOGY CO LTD

Assignee(s): GAM SHINE TECHNOLOGY CO ; GAM SHINE TECHNOLOGY CO LTD ; GAM SHING TECHNOLOGY CO ; TODAY SHENG TECHNOLOGY CO LTD

Inventor(s): (std): CHEN HONGKUN ; CHEN KENNY ; ZHANG HUIMING

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

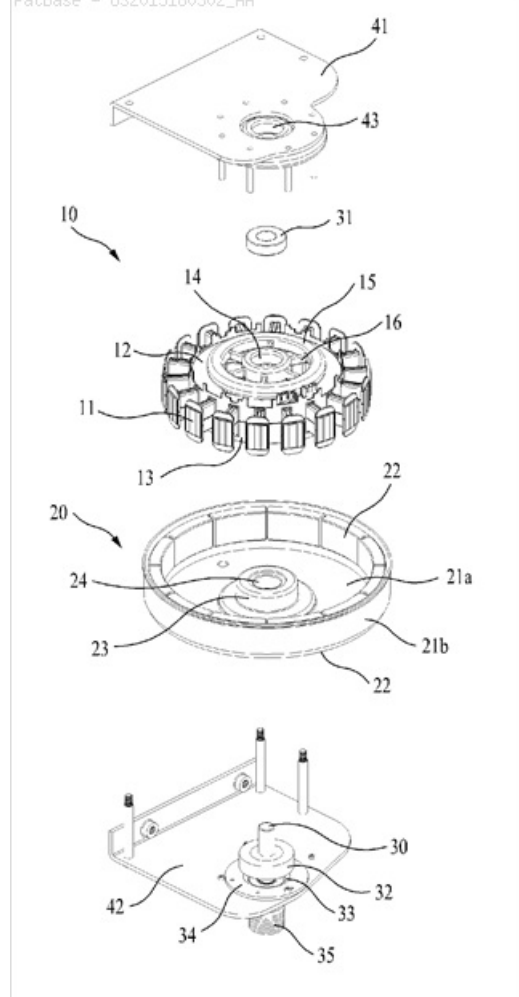
5) Family number: 55806014 (US2015180302A)

Title: MOTOR WITH ONE-WAY ROTATION

Abstract:

Source: US2015180302A A motor with one-way rotation including: a stator having a stator core, an upper insulator joined to the upper portion of the stator core, and a lower insulator joined to the lower portion of the stator core; a rotor having a rotor housing which includes a disc part having a hollow portion formed at the center and a side wall part vertically formed along the outer circumference of the disc part in the upward direction, and a plurality of magnets attached to the inner face of the side wall part of the rotor housing, the disc part having a one-way bearing seating portion formed around the hollow portion; a rotary shaft penetrating through the central portions of the stator and the rotor; and a one-way bearing having an outer wheel joined to the one-way bearing seating portion and an inner wheel joined to the rotary shaft.

PatBase - US2015180302_AA



International class (IPC 8-9): H02K5/16 H02K5/173 H02K7/108 H02K7/118 (Advanced/Invention); H02K21/22 (Advanced/Non-invention)

CPC: H02K5/163 H02K7/108 H02K5/1732 H02K7/1185 H02K21/22

US class: 310/90

Family:

Publication number	Pub. date	Application number	App. date
KR101363218 B1	20140214	KR20120099254	20120907
US2015180302 AA	20150625	US20130415599	20130826
US9647507 BB	20170509	US20130415599	20130826
WO14038805 A1	20140313	WO2013KR07630	20130826

Priority: KR20120099254 20120907; WO2013KR07630 20130826;

Cited documents: US8348798 BB, US7732961 BB, US7703307 BB, US2015180302 AA, US2012302390 AA, US2011037328 AA, US2009174271 AA, US2007063595 AA, KR100951425 B1, KR100951425, KR100686037 B1, KR100619783 B1,

Assignee(s): (std): NEW MOTECH CO LTD

Assignee(s): NEW MOTECH CO

Inventor(s): (std): JANG JEONG CHEOL ; YANG GYEONG SIK

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 LK LR LS LT LU LV LY MA MC MD ME

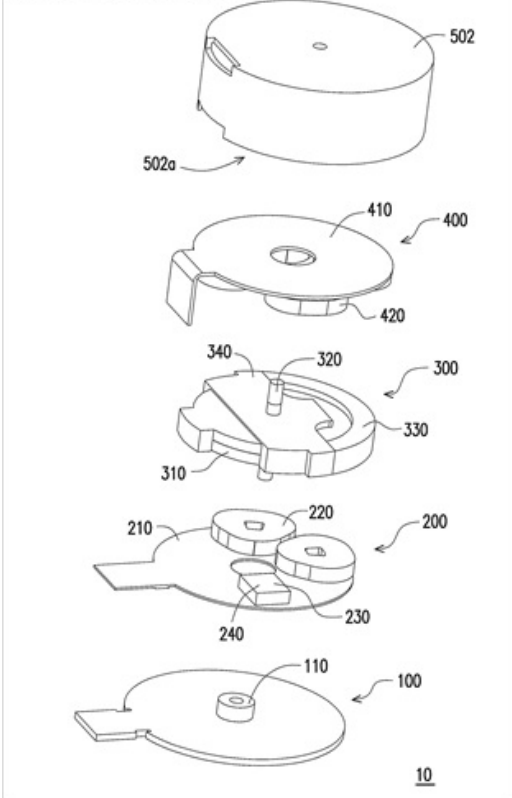
6) Family number: 48166225 (US2011012459A)

Title: POWER GENERATING DEVICE

Abstract:

Source: US2011012459A A power generating device includes a carrier module, a stator module, a rotor module and a power generating module. The stator module is assembled to the carrier module, and has a first circuit board and a plurality of driving coils. The rotor module is located in an electromagnetic field, and has a multipolar magnetic rotor and a rotating axle. A magnetic field of the multipolar magnetic rotor interacts with the electromagnetic field to make the rotor module rotating relative to the stator module, and make the multipolar magnetic rotor producing a varying magnetic field. The power generating module is located in the varying magnetic field, and has a second circuit board and a plurality of induction coils. The induction coils induce the varying magnetic field to output an induction circuit to the second circuit board.

PatBase - US2011012459_AA



International class (IPC 8-9): F03G5/06 H02J7/14 H02K37/00 H02K47/00 H02K47/04 H02K51/00 H02K7/06 H02K7/116 H02K7/14

H02N2/18 (Advanced/Invention);

H02K53/00 (Advanced/Non-invention);

H02K51/00 H02K7/116 (Core/Non-invention)

CPC: H02K7/1853 H02K7/063 H02K7/116 H02K35/02 H02N2/18

European class: H02K7/06B1 H02K7/18A4 H02N2/18 T02K35/02 T02K7/116

US class: 290/1.00AS 290/1A 310/113 310/113P 310/339 310/339S 310/37 310/47 310/50 310/75R 310/80 310/81 310/81S 320/114 415/916 415/916S

Family:

Publication number	Pub. date	Application number	App. date
TW201105012 A	20110201	TW20090124140	20090716
TWI394352 B	20130421	TW20090124140	20090716
US2011012459 AA	20110120	US20090605387	20091026
US2012280657 AA	20121108	US20120553791	20120719
US8310114 BB	20121113	US20090605387	20091026
US8432073 BB	20130430	US20120553791	20120719

Priority: TW20090124140 20090716; US20090605387 20091026; US20120553791 20120719;

Cited documents: US8193769 BB, US4475075 A, US3518465 A, US2009108802 AA, US2009058360 AA, US2009051317 AA, US2009033169 AA, US2008220827 AA, US2008106149 AA, US2006250036 AA, US2006032687 AA, US2004204180 AA, US2003184165 AA, US2002121844 AA, US2002047333 AA, TWM358468 Y, TWM351548 Y, TWM338498 Y, TWM338498, TWM318070 Y, TWM274718 Y, TWI294205 B, TW500274 Y, TW346287 Y, TW338498 Y, TW298352 Y, TW200837280 A, TW1294205, JP5146134 A2, CN1262803 A, CN101442248 A,

Assignee(s): (std): CHANG CHI LONE ; CHIN CHI YUAN ; SILICON TOUCH TECH INC

Assignee(s): SILICON TOUCH TECHNOLOGY INC

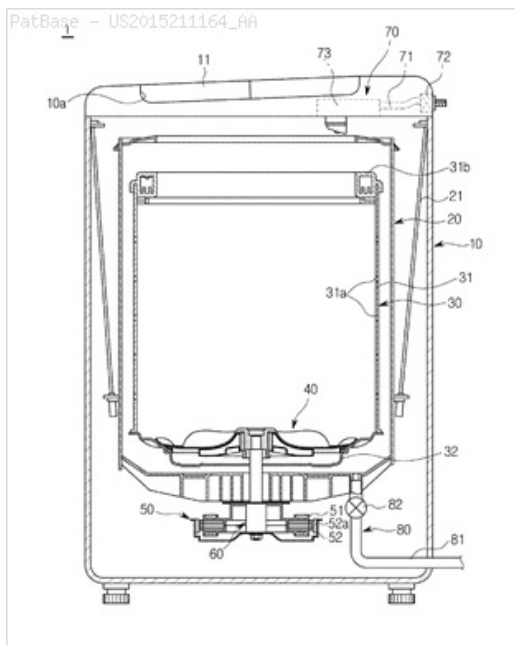
Inventor(s): (std): CHIN CHI YUAN ; CHANG CHI LONE

7) Family number: 59938122 (US2015211164A)

Title: WASHING MACHINE

Abstract:

Source: US2015211164A Disclosed herein is a washing machine, which includes a clutch unit provided to be able to selectively transmit power generated from a drive unit to a drum and a pulsator. The clutch unit includes an outer shaft that is connected to the drum at an upper side thereof and rotates the drum, an inner shaft that is located in the outer shaft, is connected to the pulsator at an upper side thereof, and rotates the pulsator, and a one-way bearing that is installed between the inner shaft and the outer shaft. The one-way bearing selectively transmits a rotating force from the outer shaft to the inner shaft according to a rotating direction of the outer shaft. With this configuration, it is possible to simplify a structure of the clutch unit and to use space efficiently.



International class (IPC 8-9): D06F17/08 D06F17/10 D06F29/00 D06F37/12 D06F37/24 D06F37/30 D06F37/40 D06F39/00 D06F39/14 (Advanced/Invention); D06F39/12 (Advanced/Non-invention)
CPC: D06F37/40 D06F29/00 D06F39/12 D06F39/125 D06F17/08 D06F39/005 D06F39/14
US class: 68/133
Family:

Publication number	Pub. date	Application number	App. date
KR20150090856 A	20150806	KR20150013635	20150128
US2015211164 AA	20150730	US20150608896	20150129
US9994992 BB	20180612	US20150608896	20150129
WO15115827 A1	20150806	WO2015KR00965	20150129

Priority: KR20140011614 20140129; KR20150013635 20150128;

Cited documents: US6006553 A, US2009320371 AA, US2009126419 AA, US2009072684 AA, US2006042022 AA, US2002042957 AA, KR20070003527, KR19990084877 A, KR19960034529, KR101275202 B1, KR100822153 B1, KR100822153, KR0161934 B1, JP10211397 A2,

Assignee(s): (std): SAMSUNG ELECTRONICS CO LTD

Assignee(s): SAMSUNG ELECTRONICS CO

Inventor(s): (std): PARK JONG WOON ; KIM YOUNG HYUN ; KANG GEUN

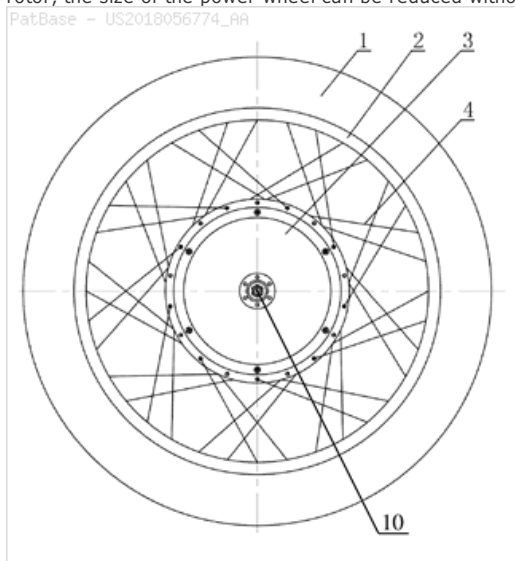
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8) Family number: 68719116 (US2018056774A)

Title: WHEEL HUBS AND POWER WHEELS CONTAINING THE SAME

Abstract:

Source: US2018056774A A wheel hub capable of being coupled to an axle of a wheel such that the wheel hub is rotatable around the axle. The wheel hub includes a hub housing adapted to be rotatably supported on the axle, and a motor including a stator and a rotor. The stator is adapted to be fixedly connected to the axle. The rotor is configured to be rotatable with respect to the stator. The rotor includes a circular rotor housing inside which a gear reduction module is located. The output of the gear reduction module is connected to a one-way transmission module which in turn is adapted to drive the hub housing to rotate. As the gear reduction module and the one-way transmission module are contained within the rotor, the size of the power wheel can be reduced without sacrificing the performance.



International class (IPC 8-9): B60K17/02 B60K17/14 B60K7/00 B62M11/16 B62M6/65 B62M7/12 (Advanced/Invention)
CPC: B60K7/0007 B60K17/145 B60Y2200/13 B60K2007/0092 B60K17/02 B62M6/65 B62M11/16
Family:

Publication number	Pub. date	Application number	App. date
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CN107792291 A	20180313	CN201710762402	20170830
EP3290322 A1	20180307	EP20170188080	20170828
US2018056774 AA	20180301	US20160251685	20160830

Priority: US20160251685 20160830;

Cited documents: WO14174403 A1, KR20150044551 A, JP11255177, GB2357329 A1,

Assignee(s): (std): FOSTER ASSETS CORP

Inventor(s): (std): CHAN YET

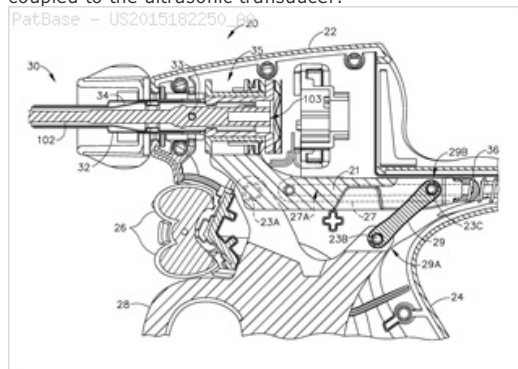
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

9) Family number: 59627163 (US2015182250A)

Title: COUPLING FEATURES FOR ULTRASONIC SURGICAL INSTRUMENT

Abstract:

Source: US2015182250A A surgical apparatus comprises a body, an ultrasonic transducer, a shaft, and an end effector. The ultrasonic transducer is operable to convert electrical power into ultrasonic vibrations. The body comprises a pivotal trigger. The shaft couples the end effector and the body together. The end effector comprises a clamp arm and an ultrasonic blade in acoustic communication with the ultrasonic transducer. The ultrasonic blade is operable to deliver ultrasonic vibrations to tissue. Pivotal movement of the trigger causes movement of the clamp arm. The shaft is operable to be selectively coupled and decoupled from the ultrasonic transducer. The apparatus comprises electro-mechanical means for coupling and decoupling the shaft from the ultrasonic transducer, and may further comprise means for preventing movement of the shaft as it is coupled to the ultrasonic transducer.



International class (IPC 8-9): A61B17/00 A61B17/32 (Advanced/Invention);

A61B17/00 (Advanced/Non-invention)

CPC: A61B17/320092 A61B17/320068 A61B2017/0046 A61B2017/00473 A61B2017/00477 A61B2090/031

US class: 606/169

Family:

Publication number	Pub. date	Application number	App. date
BR112016015023 A2	20170808	BR20161115023	20141223
CN105939679 A	20160914	CN201480071062	20141223
EP3086722 A1	20161102	EP20140831133	20141223
IN201617021787 A	20160831	IN201617021787	20160624
JP2017500157 T2	20170105	JP20160542900T	20141223
US2015182250 AA	20150702	US20130142216	20131227
US9539020 BB	20170110	US20130142216	20131227
WO15100285 A1	20150702	WO2014US72040	20141223

Priority: US20130142216 20131227; WO2014US72040 20141223;

Cited documents: US8800838 BB, US8623027 BB, US8591536 BB, US8486096 BB, US8461744 BB, US6783524 BB, US6773444 BB, US6695782 BB, US6325811 BA, US5980510 A, US5873873 A, US5776155 A, US5582617 A, US5322055 A, US2014005701 AA, US2013324998 AA, US201314028717, US2013095077 AA, US2012138660 AA, US201213657553, US201213538588, US2012116265 AA, US2012112687 AA, US2012029546 AA, US2011196402 AA, US2011196375 AA, US2011087218 AA, US2011087212 AA, US2011015660 AA, US2010069940 AA, US2009105750 AA, US2008200940 AA, US2007282333 AA, US2007191713 AA, US2006079874 AA, US2002055754 AA, JP2013081779 A2, EP2581055 A2, EP2055243 A2,

Assignee(s): (std): ETHICON ENDO SURGERY INC ; ETHICON ENDO SURGERY LLC

Assignee(s): ETHICON LLC ; HELBLING PRECISION ENGINEERING INC

Inventor(s): (std): CONLON SEAN P ; CONSTANTINEAU COLE ; HIBNER JOHN A ; MONROE DAVID A ; RAMEZANIFARD MOHAMMADREZA ; BRUEHWILER MICHEL ; CAGLE DAVID J ; SOKHANVAR SAEED ; WALISH JUDY ; YASEVAC DANIEL

Inventor(s): COLE CONSTANTINEAU ; SAEED SOKHANVAR ; SEAN P CONLON ; JOHN A HIBNER ; JUDY WALISH ; MICHEL BRUEHWILER ; MOHAMMADREZA RAMEZANIFARD ; DANIEL YASEVAC ; DAVID A MONROE ; DAVID J CAGLE

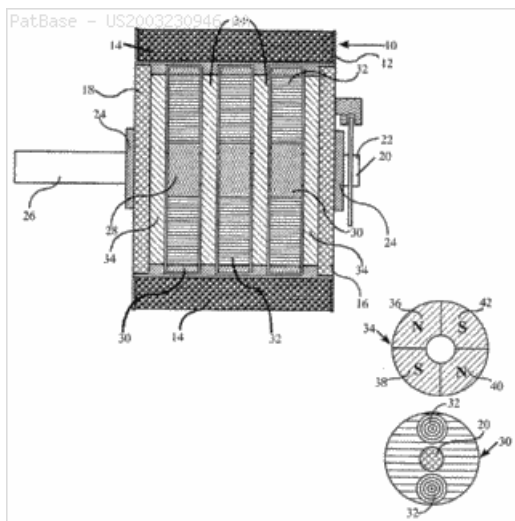
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10) Family number: 29906939 (US2003230946A)

Title: FLUX DIODE MOTOR

Abstract:

Source: US2003230946A An electric motor utilizing permanent magnets, wherein the permanent magnets produce a flux circuit in a first direction and shunt elements whereby the magnets and shunt elements rotate relative to each other wherein the shunt elements sequentially interrupt the magnet flux circuit to minimize generated flux circuits tending to rotate the motor in a direction opposite to the primary direction of motor rotation.



International class (IPC 8-9): H02K21/04 H02K21/12 H02K21/44 (Advanced/Invention);
H02K21/00 H02K21/12 (Core/Invention)

International class (IPC 1-7): H02K1/12 H02K21/12 H02K23/04

CPC: H02K21/042 H02K21/12 H02K21/44

European class: H02K21/04R H02K21/12 H02K21/44

US class: 310/154.29 310/156.07 310/156.17 310/156.35 310/156.36 310/156.37 310/156.54 310/156.84 310/216.016 310/216.074 310/254 310/254.1 310/261 310/261.1 310/268 310/49R

Family:

Publication number	Pub. date	Application number	App. date
US2003230946 AA	20031218	US20030436852	20030512
US6611078 BA	20030826	US20000619618	20000719
US6707208 BB	20040316	US20030436852	20030512
US6853110 BA	20050208	US20020202434	20020724

Priority: US20000619618 20000719; US20020202434 20020724; US20030436852 20030512;

Cited documents: US6608419 BB, US6244395 BA, US6208053 BA, US6133664 A, US5952756 A, US5710474 A, US4980593 A, US4908808 A, US4899074 A, US4885493 A, US4757224 A, US4587449 A, US4358695 A,

Assignee(s): (std): TRI SEVEN RES INC

Assignee(s): TRI SEVEN RESEARCH INC ; TRI SEVEN RESEARCH INC A OF KANSAS CORP ; DURHAM GARY L ; DURHAM HAROLD S

Inventor(s): (std): DURHAM GARY L ; DURHAM HAROLD S ; DURHAM HAROLD STEPHEN

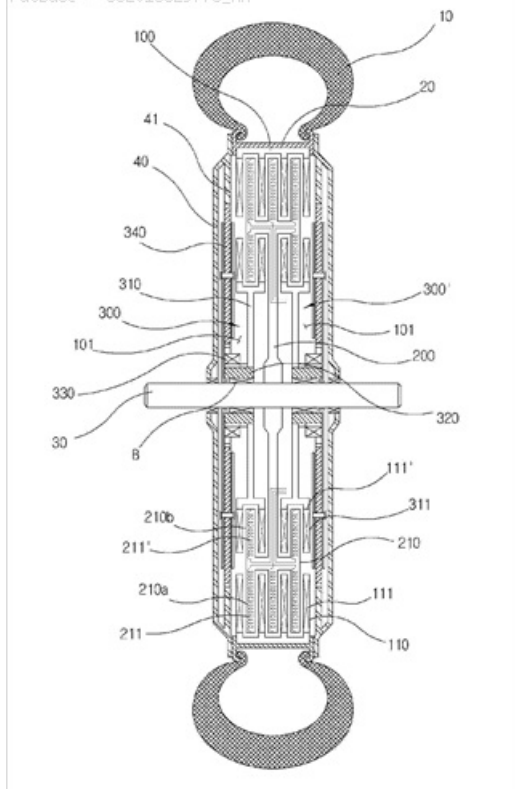
11) Family number: 55895243 (US2016329775A)

Title: WHEEL HAVING ELECTRICITY GENERATION-COMBINED ELECTROMECHANICAL MEANS HAVING PLURALITY OF AUXILIARY POWER STRUCTURES

Abstract:

Source: US2016329775A The present invention relates to a wheel including a means for power generation and transfer having a plurality of auxiliary power units in which compartments are formed inside one wheel, and a plurality of auxiliary power units capable of generating auxiliary power separately from a main power source are installed in the compartments, such that it is possible to secure increased driving force and rotational force while minimizing costs required for securing compartments required to facilitate a separate auxiliary power source, as well as decrease a used power due to driving an apparatus using the auxiliary power, and by reasonably solving the problems entailed in the wheel including a means for power generation and transfer, efficiency thereof is significantly improved.

PatBase - US2016329775_AA



Family:

Publication number	Pub. date	Application number	App. date
AU2013407660 A1	20150618	AU20130407660	20131212
AU2013407660 AA	20150618	AU20130407660	20131212
AU2013407660 BB	20180118	AU20130407660	20131212
BR112016013248 A2	20170808	BR20161113248	20131212
CA2932719 A	20160603	CA20132932719	20131212
CN105980164 A	20160928	CN2013800081479	20131212
CN105980164 B	20180123	CN2013800081479	20131212
EP3081388 A1	20161019	EP20130899346	20131212
EP3081388 A4	20170920	EP20130899346	20131212
IN201706155 A	20170609	ID2016P0003822	20131212
IN201647019639 A	20160831	IN201647019639	20160608
JP2016540492 T2	20161222	JP20160556229T	20131212
KR6140905 B2	20170607	JP20160556229T	20131212
KR201369614 B1	20140304	KR20130152716	20131210
MX2016007452 A1	20161220	MX20160007452	20131212
RU2016122649 A	20171213	RU20160122649	20131212
RU2640916 C2	20180112	RU20160122649	20131212
RU2640916 C9	20180412	RU20160122649	20131212
TW201529364 A	20150801	TW20140141633	20141201
TW1551478 B	20161001	TW20140141633	20141201
US2016329775 AA	20161110	US20130102772	20131212
WO15088076 A1	20150618	WO2013KR11539	20131212
ZA201603572 A	20170726	ZA20160003572	20160525

Priority: KR20130152716 20131210; WO2013KR11539 20131212;

Cited documents: WO11071311 A2, TW271131 B, RU2156191 C2, KZ26372 A4, KR20110064759 A, KR20100012178 A, KR20090052679 A, KR1020090052679, KR101117044 B1, KR101025387 B1, JP1712372 A2, JP1712372, JP3157836 U, JP3157836 U, JP3011954 A2, JP3011954, JP2013533821 T2, JP2013533821, JP2013512825 T2, JP2013512825, JP2011519544 T2, JP2011519544, JP2008044588 A2, JP2008044588, JP20040488961 T2, JP20040488961, JP2002281722 A2, JP2002281722, JP1988178761, JP10178761, JP10178761.

DE202013101648 U1

CN2544973 Y, CN202353386 U, CN1272714 A, CN102292901 A,
Assignee(s): (std): JANG SUK ; JANG SUK HO ; SUK HO JANG ; ZHANG XIHU
Inventor(s): (std): SUK HO JANG ; ZHANG XIHU ; JANG SUK HO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG

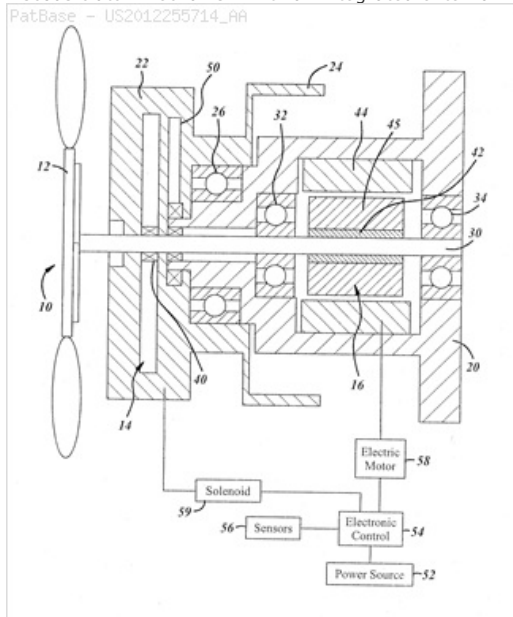
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12) Family number: 48764031 (US2012255714A)

Title: HYBRID FAN DRIVE WITH ELECTRIC MOTOR

Abstract:

Source: US2012255714A Thermal management systems for vehicle engines which include hybrid fan drives with viscous clutches and electronic motors, particularly brushless DC motors (BLDC). One embodiment incorporates a pulley driven, electronically controlled viscous clutch mechanism and an internal rotor BLDC motor. Another embodiment includes an engine crank mounted electronically controlled viscous clutch mechanism with a tethered electric motor, particularly a BLDC motor. A further embodiment is an engine block mounted electronically controlled viscous clutch mechanism with an integrated external rotor BLDC motor.



International class (IPC 8-9): F01P5/02 F01P5/04 F01P7/04 F04D25/02 F04D25/06 F04D25/08 F04D27/00 F04D29/04 H01L23/467 (Advanced/Invention)

CPC: F04D25/08 F04D25/02 F01P7/042 F01P7/046 F01P7/048 F04D25/0606 H01L2924/0002 H01L2924/00 H05K999/00

European class: F01P7/04B F01P7/04D F01P7/04E F04D25/02 F04D25/06B

US class: 165/121

Family:

Publication number	Pub. date	Application number	App. date
CN102575563 A	20120711	CN201080045786	20101015
CN102575563 B	20150701	CN201080045786	20101015
CN104832266 A	20150812	CN201510272860	20101015

CN104832266 B	20171201	CN201510272860	20101015
CN104895661 A	20150909	CN201510272402	20101015
DE112010004066 T5	20121018	DE201011004066T	20101015
US2012255714 AA	20121011	US20100500938	20101015
US9850909 BB	20171226	US20100500938	20101015
WO11047268 A2	20110421	WO2010US52854	20101015
WO11047268 A3	20110804	WO2010US52854	20101015

Priority: US20090252662P 20091017; US20090252664P 20091017; US20090252665P 20091017; CN201080045786 20101015; WO2010US52854 20101015; US20100500938 20101015;

Cited documents: US7478656 BB, US7472778 BB, US7249644 BB, US7178656 BB, US7083032 BB, US7011198 BB, US6921250 BB, US6802283 BB, US6772714 BB, US6752251 BB, US6695113 BB, US6055946 A, US5989151 A, US5855266 A, US5826549 A, US5667045 A, US5617817 A, US5557930 A, US5224446 A, US5049112 A, US5030865 A, US4899861 A, US4874072 A, US4846258 A, US4485888 A, US4441462 A, US4376424 A, US4365592 A, US4346797 A, US4302156 A, US4227861 A, US4094393 A, US3894521 A, US3853098 A, US3363734 A, US3207279 A, US3120219 A, US2956450 A, US2016108974 AA, US2012255714 AA, US2012107145 AA, US2011123365 AA, US2011092324 AA, US2010122673 AA, US2006137956 AA, US2006054373 AA, US2004011306 AA, US2003079952 AA, US2002096132 AA, US2001017250 AA, KR100908396 B1, JP2004156780 A2, JP2002276363 A2, DE10219872 A1, CN2359871 Y, CN2359831 Y, CN1807918 A,

Assignee(s): (std): BORG WARNER INC ; BORGWARNER INC ; BUCHHOLZ THOMAS ; ROBY JOSHUA L

Inventor(s): (std): BUCHHOLZ THOMAS ; ROBY JOSHUA L ; THOMAS BUCHHOLZ

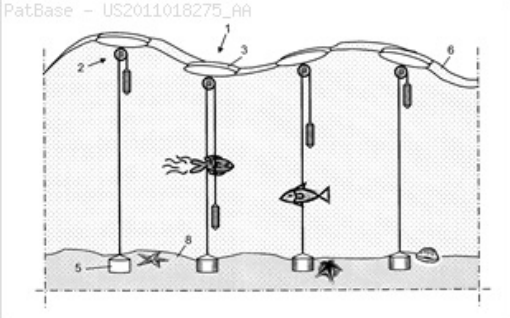
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13) Family number: 43649278 (US2011018275A)

Title: WAVE POWER PLANT AND TRANSMISSION

Abstract:

Source: US2011018275A A wave energy converter includes a buoy and a transmission unit. In the transmission unit there is a driveshaft, which is driven to rotate either when the buoy rises or sinks, yet always in the same direction. The driveshaft is mechanically coupled to one of the rotating parts of an electric generator and drives this to generate electric current. Further on there is an energy accumulation device, which is also coupled to the driveshaft to accumulate energy when the buoy rises or sinks and the driveshaft rotates and which is then used to drive the generator at the other of the rising and sinking motions. The coupling between the energy accumulation device and the driveshaft can go by the generator's second rotatable part, the air gap between the generator's parts and the generator's first part. The coupling over the air gap gives a torque, which drives the second part to rotate along and which also counteracts the rotation of the driveshaft. The generator's second part is driven by the energy accumulation device to rotate in the other direction, when the torque from the driveshaft does not exceed the counteracting torque.



International class (IPC 8-9): F03B F03B13/10 F03B13/12 F03B13/14 F03B13/18 H02K H02K23/60 H02P9/04 (Advanced/Invention);

F03B13/14 F03B13/18 H02K23/60 (Advanced/Non-invention);

F03B13/00 H02K23/60 (Core/Invention);

F03B H02K (Subclass/Invention)

CPC: F03B13/1815 F05B2210/18 F05B2240/40 Y02E10/38 F03B13/1885 F03B13/18 F03B13/14 F03B13/16 H02K23/60

European class: F03B13/18B2B F03B13/18H H02K23/60 R05B210/18 R05B240/40 Y02E10/38

US class: 290/53 290/53P

Family:

Publication number	Pub. date	Application number	App. date
AU2009215956 AA	20090827	AU20090215956	20090220
AU2009215956 BB	20130808	AU20090215956	20090220
BRP10908157 A2	20150811	BR2009PI08157	20090220
CA2715601 AA	20090827	CA20092715601	20090220
CA2715601 C	20160503	CA20092715601	20090220
CN102016294 A	20110413	CN200980113862	20090220
CN102016294 B	20140430	CN200980113862	20090220
EP2257708 A1	20101208	EP20090711692	20090220
EP2257708 A4	20130410	EP20090711692	20090220
JP2011512488 T2	20110421	JP20100547589T	20090220
JP5604310 B2	20141008	JP20100547589T	20090220
KR101679433 B1	20161124	KR20107018433	20090220
KR20100133364 A	20101221	KR20107018433	20090220
NZ587401 A	20121221	NZ20090587401	20090220
SE200800395 A	20090821	SE20080000395	20080220
SE200800395 L	20090821	SE20080000395	20080220
SE532074 C2	20091020	SE20080000395	20080220
US2011018275 AA	20110127	US20090867431	20090220
US8581433 BB	20131112	US20090867431	20090220
WO9105011 A1	20090827	WO2009SE00100	20090220
ZA201005830 A	20111026	ZA20100005830	20100816

Priority: SE20080000395 20080220; SE20080002165 20081010; SE20080021651 20081010; WO2009SE00100 20090220;

Cited documents: WO07084013 A1, WO05054668 A1, WO05038244 A1, WO03058054 A1, US8441139 BB, US8421259 BB, US8405241 BB, US8397497 BB, US8319359 BB, US8276377 BB, US8084877 BA, US7791213 BB, US7683500 BB, US7319278 BB, US7245041 BA, US7045912 BB, US5889336 A, US5424582 A, US5066867 A, US4242593 A, US4241579 A, US4145885 A, US3567953 A, US2013134714 AA, US2013127168 AA, US2013113214 AA, US2013082465 AA, US2012112472 AA, US20111304145 AA, US2010102562 AA, US2009102200 AA, US2007164568 AA, US2006273594 AA, US1292223 A, JP5322934 A2, JP53022934 A2, JP3168363 A2, JP11006472 A2, GB2062113 A1, FR2869368 A1, FR2409396 A1, FR2339071 A1, CN2099205, CN1064917,

Assignee(s): (std): OCEAN HARVESTING TECH AB ; OCEAN HARVESTING TECHNOLOGIES ; OCEAN HARVESTING TECHNOLOGIES AB ; SIDENMARK MIKAEL

Inventor(s): (std): MIKAEL SIDENMARK ; SIDENMARK MIKAEL

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 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 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

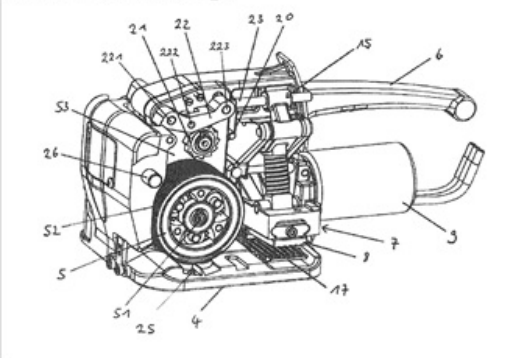
14) Family number: 56032902 (US2014083311A)

Title: MOBILE STRAPPING DEVICE

Abstract:

Source: US2014083311A A mobile strapping device for strapping goods with a strap is provided which comprises a tensioning means (5, 25) for applying a tension to a loop of said strap, a connecting means (7) for providing a connection in said strap for forming a closed loop of said strap, a chargeable energy storage means and a drive means (9) for driving said tensioning means (5, 25) and said connecting means (7) by energy supplied by said chargeable energy storage means. The tensioning means (5, 25) comprises a tensioning wheel (5) having an outer circumferential surface and being rotatably drivable about its rotational axis by said drive means and a tensioning element (25) having a surface which faces the outer circumferential surface of said tensioning wheel (5), wherein said tensioning wheel (5) is pivotable about a pivot axis (26) which is parallel to and offset from said rotational axis of said tensioning wheel (5).

PatBase - US2014083311_AA



International class (IPC 8-9): B65B13/02 B65B13/18 B65B13/22 B65B13/32 (Advanced/Invention)

CPC: B65B13/025 B65B13/185 B65B13/187 B65B13/327 B65B13/22

US class: 1/1 100/29 100/4

Family:

Publication number	Pub. date	Application number	App. date
DE602012024771 D1	20161222	DE201260024771T	20120924
EP2711301 A1	20140326	EP20120185739	20120924
EP2711301 B1	20161102	EP20120185739	20120924
EP2865601 A1	20150429	EP20140198349	20120924
US2014083311 AA	20140327	US20120652628	20121016
US9403609 BB	20160802	US20120652628	20121016

Priority: EP20120185739 20120924; EP20140198349 20120924;

Cited documents: US6328087 BA, US5954899 A, US5653095 A, US4934261 A, US4282907 A, US4015643 A, US3249131 A, US3169011 A, US3028885 A, US2936156 A, US2011056392 AA, US2009013656 AA, US2003230058 AA, EP1371560 A1, EP1008520 A1, EP0338700 A2,

Assignee(s): (std): S I A T SOCIETA INTERNAZZ APPLIC TECNICHE S P A ; SIAT S P A

Assignee(s): SIAT SOCIETA INTERNAZIONALE APPLICAZIONI TECNICHE SPA ; SIATSPA ; SIAT SPA

Inventor(s): (std): BONIFAZI ANTONIO ; IZZO NICOLA ; TCHAVDAROV LUDMIL

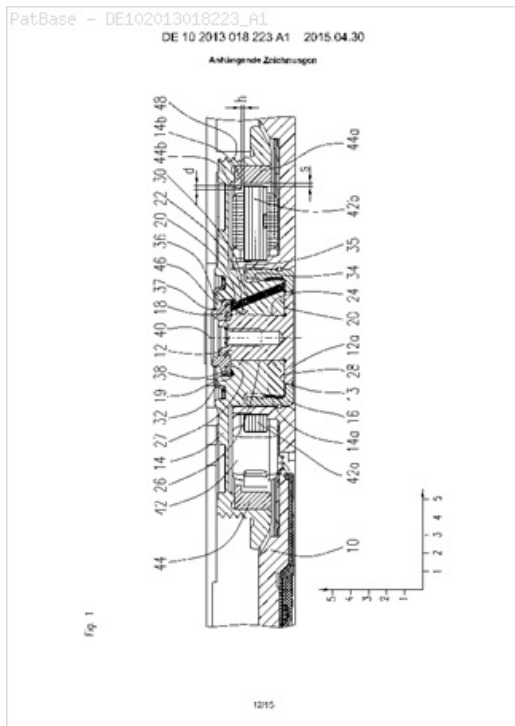
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

15) Family number: 59088042 (DE102013018223A1)

Title: SPINDELMOTOR MIT EINEM FLUIDDYNAMISCHEN LAGERSYSTEM Spindle motor having a fluid dynamic bearing SYSTEM (Machine translation)

Abstract:

Source: DE102013018223A1 Die Erfindung betrifft einen Spindelmotor mit einem feststehenden Motorbauteil und einem mittels eines fluiddynamischen Lagersystems um eine Rotationsachse drehbar gelagerten Motorbauteil. Das drehbare Motorbauteil ist durch ein elektromagnetisches Antriebssystem angetrieben, das einen am drehbaren Motorbauteil angeordneten Rotormagnet und eine am feststehenden Motorbauteil angeordnete Statoranordnung umfasst, wobei die Statoranordnung aus einem ferromagnetischen Statorkern besteht, der radial abstehende Statorpole aufweist, welche mit Spulenwicklungen versehen sind. Desweiteren sind Mittel zur axialen Vorspannung des fluiddynamischen Lagersystems vorhanden. Erfindungsgemaess umfassen die Mittel zur axialen Vorspannung die Statoranordnung und den Rotormagnet, wobei ein radialer Schenkel eines magnetischen Rueckschlusses fuer den Rotormagneten oder ein radialer Schenkel des Rotormagneten derart ausgebildet ist, dass er mit dem Kern (42a) der Statoranordnung (42) in radialer Richtung ueberlappt. The invention relates to a spindle motor with a stationary engine component and a fluid-dynamic means of a bearing system about a rotation axis rotatable motor component. The rotatable engine member is driven by an electromagnetic drive system which includes a arranged on the rotatable motor component rotor magnet and disposed on the stationary engine component stator, wherein the stator consists of a ferromagnetic stator core having radially projecting stator poles, which are provided with coil windings. Furthermore, means for axial preload of the fluid dynamic bearing system are available. Erfindungsgemaess, the means for axially biasing the stator and the rotor magnet, wherein a radial arm of a magnetic Rueckschlusses for the rotor magnets or a radial arm of the rotor magnet is formed such that it overlaps with the core (42a) of the stator assembly (42) in the radial direction.



International class (IPC 8-9): H02K1/22 H02K5/16 (Advanced/Invention)

CPC: H02K1/2786 F16C17/107 H02K7/085 H02K21/22 H02K2201/03 H02K2205/03 H02K2213/03 G11B19/2036

Family:

Publication number	Pub. date	Application number	App. date
DE102013018223 A1	20150430	DE201310018223	20131030

Priority: DE201310018223 20131030;

Cited documents: WO0045498 A2, US2003235353 AA,

DE102012020866 A1

DE102011101769 A1

DE102006032673 A1

Assignee(s): (std): MINEBEA CO LTD

Assignee(s): MINEBEA CO

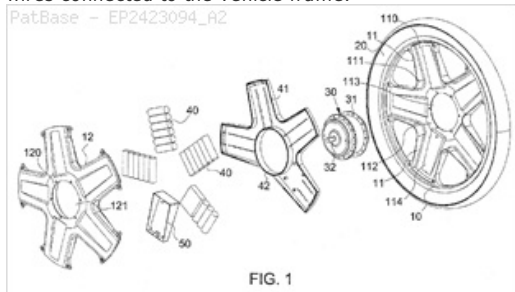
Inventor(s): (std): GU CHUNHUI

16) Family number: 50434989 (EP2423094A2)

Title: ELECTRIC WHEEL FOR ELECTRIC VEHICLES ELEKTRISCHES RAD FUER ELEKTRISCHE FAHRZEUGE ROUE ELECTRIQUE POUR VEHICULES ELECTRIQUES

Abstract:

Source: EP2423094A2 The present invention discloses an electric wheel for electric vehicles includes a rim (10), connecting members (11), a hub motor (30), a battery (40), and a control device (50). The connecting members (11) are connected to an inside of the rim (10) and the hub motor (30) is connected to the connecting members (11). The hub motor (30) includes a shaft, a rotor and a stator. The shaft is located on a central axis of the rim and two ends of the shaft are fixed to a vehicle frame. The battery (40) is located on the rim and the control device (50) receives a wireless command signal and generating a control signal to control the battery (40) to provide power to the hub motor (30), and to allow the hub motor (30) to operate. The rim (11) is equipped with the battery (40) and the hub motor (30) and directly connected to the vehicle frame without wires connected to the vehicle frame.



International class (IPC 8-9): B60K1/00 B60K1/04 B60K17/04 B60K17/14 B60K7/00 B60L15/00 B62M6/65 B62M6/90 B62M7/00 H02K5/16 H02K7/116 (Advanced/Invention)

CPC: Y02T10/641 B60L11/1805 B60L11/1864 B60L11/1877 B60L2220/44 B60L2220/50 B62M6/65 B60K1/04 B60K7/0007 B60K17/046 B60K2001/045 B60K2007/0038 B60K2007/0092 B60Y2200/13 B62M6/90 Y02T10/7005 Y02T10/7061

European class: B60K1/04 B60K7/00E B62M6/65 B62M6/90 L60K1/04A17 L60K17/04B1 L60K7/00R L60K7/00W L60Y200/13 Y02T10/64B

Family:

Publication number	Pub. date	Application number	App. date
CN202094754 U	20111228	CN201120210711U	20110621
DE602011005847 D1	20140515	DE201160005847T	20110812
EP2423094 A2	20120229	EP20110177521	20110812
EP2423094 A3	20130213	EP20110177521	20110812
EP2423094 B1	20140402	EP20110177521	20110812
JP2012051559 A2	20120315	JP20110188186	20110831
TW201208907 A	20120301	TW20100129294	20100831
TW201236918 A	20120916	TW20110108216	20110311

Priority: TW20100129294 20100831; TW20110108216 20110311; EP20110177521 20110812;

Cited documents: WO10091323 A1, WO10077300 A2, WO10077300, US7719412 BB, US6974399 BB, US6321863 BA, US5600191 A, US5465802 A, US5450915 A, US4913258 A, US4346777 A, US3897843 A, US3248967, US2010212980 AA, US2003213630 AA, TWM399232 Y, TWM371788, TWI261403, TW329783 B, JP7075219 A2, JP2007190945 A2, GB2387825 A1, CN1691471 A, CN101024379,

Assignee(s): (std): LO CHIU HSIANG ; QIUXIANG LUO

Assignee(s): LO CHIU HSIANG TAN TZ ; LO, CHIU-HSIANG ; LUO QIUXIANG

Inventor(s): (std): LO CHIU HSIANG ; QIUXIANG LUO

Inventor(s): LUO QIUXIANG

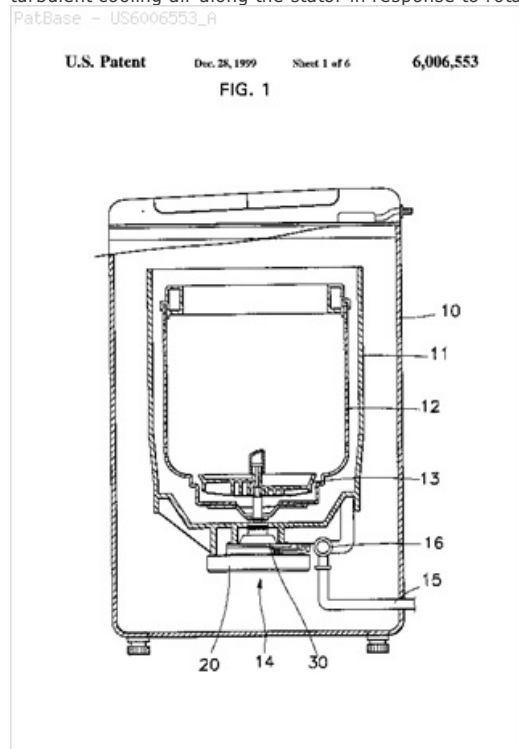
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

17) Family number: 11059469 (US6006553A)

Title: Heat dissipating blades for a motor of a washing machine

Abstract:

Source: US6006553A A clothes washing machine has a motor which includes a stator, and a rotor disposed around the stator. The rotor includes a disk-shaped plate having radial blades disposed on an upper surface thereof. The blades are situated beneath the stator and generate a flow of turbulent cooling air along the stator in response to rotation of the rotor.



International class (IPC 8-9): D06F37/30 H02K1/27 H02K1/32 H02K3/24 H02K7/10 H02K7/14 H02K9/00 H02K9/06 H02K9/22 (Advanced/Invention); H02K7/14 H02K9/00 (Advanced/Non-invention);

D06F37/30 H02K1/27 H02K1/32 H02K3/04 H02K7/10 H02K7/14 H02K9/00 H02K9/04 H02K9/22 (Core/Invention)

International class (IPC 1-7): D06F13/02 D06F37/30 D06F39/00 H02K1/27 H02K1/32 H02K3/24 H02K49/02 H02K7/10 H02K7/14 H02K9/00 H02K9/06 H02K9/22

CPC: D06F37/304 H02K7/10 H02K9/06

European class: D06F37/30C H02K7/10 H02K9/06

US class: 68/133 68/23.3

Family:

Publication number	Pub. date	Application number	App. date
CN1081254 C	20020320	CN19981003931	19980112
CN1191251 A	19980826	CN19981003931	19980112
DE19801551 A1	19980827	DE19981001551	19980116
GB2322240 A1	19980819	GB19980000859	19980115
GB2322240 B2	19990526	GB19980000859	19980115
GB9800859 A0	19980311	GB19980000859	19980115
JP10230094 A2	19980902	JP19980002598	19980108
JP2899266 B2	19990602	JP19980002598	19980108
KR100242321 B1	20000302	KR19970004860	19970218
KR19980068337 A	19981015	KR19970004860	19970218
US6006553 A	19991228	US19980008779	19980120

Priority: KR19970004860 19970218;

Cited documents: WO9638902 A1, US5187954 A, US4998052 A, US4659951 A, US3807420 A, US3103227 A, US2734122 A, US2669856 A, US2656702 A, US2300231 A, JP8309086 A2, JP6066261 A2, EP0750387 A1,

Assignee(s): (std): SAM SUNG ELECTRONIC ; SAMSUNG ELECTRONIC ; SAMSUNG ELECTRONICS CO LTD

Assignee(s): SAMSUNG ELECTRONICS CO LTD SUWON KYUNGKI KR ; SANSEI DENSHI KK ; SAMSUNG ELECTRONICS CO ; SAMSUNG ELECTRONICS CO LIMITED ; SAMSUNG ELECTRON CO LTD

Inventor(s): (std): CHOI HWAN YOUNG ; LEE MIN SOO ; SAI KANEI

Inventor(s): LEE MIN SOO UIWANG KR ; MIN SOO LEE ; RI MINSHU ; CHOI HWAN YOUNG ANYANG KR ; HWAN YOUNG CHOI

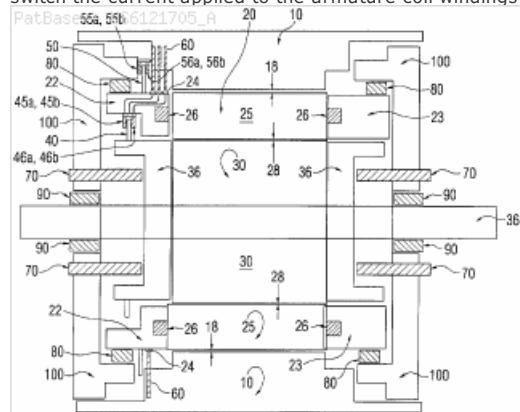
18) Family number: 12550970 (US6121705A)

Title: Alternating pole AC motor/generator with two inner rotating rotors and an external static stator

Abstract:

Source: US6121705A This invention relates to an electrical machine that functions both as an electrical motor as well as a generator concurrently. This motor or generator consist of three major members i.e. an outer stationary member called the stator (10) and two inner rotating member called Rotor A (20) and Rotor B also known as the armature (30), both of which is mounted within each other on the same rotating axis. Rotor A

(20) is mounted inside the stator (10) and is made of plurality of permanent magnets arranged in such a way that there are a plurality of alternating poles is available on both the outer and inner surface. It is the plurality of alternating poles on the outer surface that is used to interact with the magnetic field from the stator windings. The inner alternating poles is used to interact with the alternating magnetic field from the coil windings on Rotor B (30) or the armature (30). Both Rotor A and Rotor B are mounted on the same rotating axis and are controlled by one way bearings or cam clutch so that they can only rotate in one direction. By reversing the polarity of the DC current flowing through the armature, will cause a push and pull effect interacting on both Rotor A and Rotor B. Controlling the timing of the alternating DC current will cause both Rotor A and Rotor B to move only in one direction either clockwise or anticlockwise with the aid of one-way bearings (80) mounted on both Rotor A and Rotor B. This timing is achieved with feedback signals from an emitter disc mounted on the rotors and an electronic control circuit to alternately switch the current applied to the armature coil windings (15)



International class (IPC 8-9): H02K16/02 (Advanced/Invention)

International class (IPC 1-7): H02K16/02

CPC: H02K16/02

European class: H02K16/02

US class: 310/103 310/113 310/114

Family:

Publication number	Pub. date	Application number	App. date
US6121705 A	20000919	US19970000758	19971230

Priority: MY19960005573 19961231;

Cited documents: US5744895 A, US5675203 A, US5170108 A, US5065060 A, US5035309 A, US4296362 A, US3898490 A,

Assignee(s): HOONG FONG CHEAN

Inventor(s): (std): HOONG FONG CHEAN

19) Family number: 57790032 (DE202014103115U1)

Title: MASCHINE ZUR WANDLUNG VON MAGNETISCHER ENERGIE IN MECHANISCHE ENERGIE MACHINE FOR CONVERSION OF MAGNETIC ENERGY IN MECHANICAL ENERGY (Machine translation)

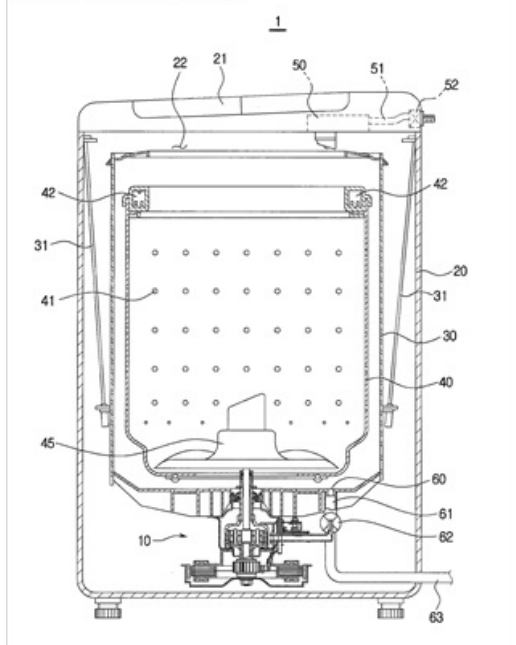
Abstract:

Source: DE202014103115U1 Maschine (1) zur Wandlung von magnetischer Energie in mechanische Energie, mit wenigstens einem Stator (3, 3') und wenigstens einem Rotor (4), dadurch gekennzeichnet, dass der Rotor (4) auf einer feststehenden zentrischen Welle (5) drehbar gelagert angeordnet ist, an dem Rotor (4) auf beiden Seiten des Rotors (4) jeweils wenigstens zwei Hebelarme (7, 8, 9, 10) drehbar gelagert angeordnet sind, wobei die Drehlager der Hebelarme (7, 8, 9, 10) am Rotor (4) auf einem Kreis, vorzugsweise mit dem Radius R_{Rotor} , angeordnet sind, die Drehlager der jeweils auf der gleichen Seite des Rotors (4) angeordneten Hebelarme (7, 8, 9, 10) um einen Winkel von 360 degrees bzw. 2π geteilt durch Anzahl der Hebelarme (7, 8, 9, 10) auf der gleichen Seite des Rotors (4), also bei wenigstens zwei Hebelarmen (7, 8, 9, 10) auf jeder der beiden Seiten des Rotors (4) um einen Winkel von 180 degrees bzw. π , auf dem Kreis zueinander versetzt sind, die Drehlager der Hebelarme (7, 9) auf der einen Seite des Rotors (4) gegenüber den Drehlagern der Hebelarme (8, 10) auf der anderen Seite des Rotors (4) um einen Winkel von 360 degrees bzw. 2π geteilt durch die doppelte Anzahl der Hebelarme (7, 8, 9, 10) auf einer Seite des Rotors (4), also bei wenigstens zwei Hebelarmen (7, 8, 9, 10) auf jeder der beiden Seiten des Rotors (4) um einen Winkel von 90 degrees bzw. $\pi/2$, auf dem Kreis zueinander versetzt sind, die Hebelarme (7, 8, 9, 10), vorzugsweise mit der Hebelarmlänge L_{Hebelarm} , an ihrem freien Ende jeweils einen magnetischen Nordpol (16) oder einen magnetischen Suedpol (16) aufweisen oder ausbilden, wobei die magnetischen Nordpole (16) oder die magnetischen Suedpole (16) der Hebelarme (7, 8, 9, 10) jeweils auf einer Kurvenbahn (18) umlaufend angeordnet sind, wobei die Kurvenbahn (18) wenigstens ein im Wesentlichen Zykloide-foermiges Kurvensegment aufweist, der Stator (3, 3') fuer die magnetischen Nordpole (16) oder die magnetischen Suedpole (16) der Hebelarme (7, 8, 9, 10) auf einer jeden Seite des Rotors (4) wenigstens ein in Laengerstreckungsrichtung im Wesentlichen Zykloidsegment-foermiges Eisenkernsegment aufweist, wobei das Eisenkernsegment des Stators (3, 3') derart angeordnet ist, dass zwischen den magnetischen Nordpolen (16) oder den magnetischen Suedpolen (16) der Hebelarme (7, 8, 9, 10) und dem Eisenkernsegment des Stators (3, 3') eine magnetische Kraftwirkung gegeben ist, die die magnetischen Nordpole (16) oder die magnetischen Suedpole (16) der Hebelarme (7, 8, 9, 10) beim Kurvenbahnumlauf entlang der Kurvenbahn (18) fuehrt. Machine (1) for converting magnetic energy into mechanical energy, comprising at least one stator (3, 3') and at least one rotor (4), characterized in that the rotor (4) on a stationary central shaft (5) is arranged rotatably mounted on the rotor (4) on both sides of the rotor (4) at least two lever arms (7, 8, 9, 10) are arranged rotatably, wherein the pivot bearing of the lever arms (7, 8, 9, 10) on the rotor (4) on a circle, are preferably arranged with the radius R_{Rotor} , the pivot bearing of each on the same side of the rotor (4) arranged in the lever arms (7, 8, 9, 10) by an angle of 360 degrees and 2π divided by the number of lever arms (7, 8, 9, 10) on the same side of the rotor (4), ie at least two lever arms (7, 8, 9, 10) on each of both sides of the rotor (4) by an angle of 180 degrees or π , are added to the circuit to each other, the pivot bearings of the lever arms (7, 9) on one side of the rotor (4) relative to the pivot bearings of the lever arms (8, 10) on the other side of the rotor (4) by an angle of 360 degrees or 2π divided by twice the number of lever arms (7, 8, 9, 10) on one side of the rotor (4), ie at least two lever arms (7, 8, 9, 10) on each of both sides of the rotor (4) by an angle of 90 degrees or $\pi/2$, are offset from each other on the circle, the lever arms (7, 8, 9, 10) preferably with the lever arm L_{Hebelarm} have or can form, at their free ends each having a north magnetic pole (16) or a magnetic south pole (16), the magnetic north pole (16) or the magnetic poles (16) of the lever arms (7, 8, 9, 10) each have a cam track (18) are arranged circumferentially, wherein the curved track (18) has at least a substantially cycloid-shaped curved segment, the stator (3, 3') for the magnetic north pole (16) or the magnetic poles (16) of the lever arms (7, 8, 9, 10) on either side of the rotor (4) is a substantially Zykloidsegment-shaped iron core segment having at least Laengerstreckungsrichtung, wherein the iron core segment of the stator (3, 3') is arranged such that between the magnetic north poles (16) and the magnetic south poles (16) of the lever arms (7, 8, 9, 10) and the iron core segment of the stator (3, 3') has a magnetic force is given to the magnetic north pole (16) or the magnetic poles (16) of the lever arms (7, 8, 9, 10) performs the circulation along the curved path of the cam track (18).

Family:

Assignee(s): BURGHART

PatBase - US2017167067_AA



Family:

Priority: KR20140011407 20140129; WO2015KR00782 20150126;

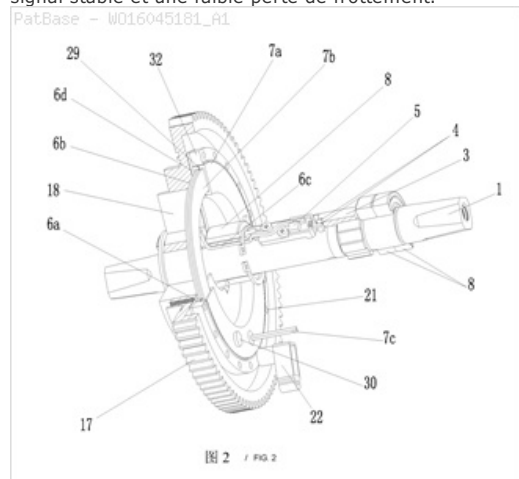
Cited documents: US4862710 A, US2004045097 AA, KR960004615 A, KR20110119123 A, KR20110022494 A, JP2011104141 A2, CN1821477 A, CN1547632 A, CN103741430 A, CN103485131 A, CN101130921 A,
Assignee(s): (std): SAMSUNG ELECTRONICS CO LTD
Assignee(s): SAMSUNG ELECTRONICS CO
Inventor(s): (std): LEE SEUNG HUN ; LEE SUNG MO ; PARK JUN HYUN
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 KZ LA LC 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

21) Family number: 58202257 (WO16045181A1)

Title: MIDDLE-MOUNTED MOTOR OF AN ELECTRIC BICYCLE AND MOMENT SENSING DEVICE THEREOF MOTEUR A MONTAGE CENTRAL D'UNE BICYCLETTE ELECTRIQUE ET DISPOSITIF DE DETECTION DE COUPLE DE CELUI-CI

Abstract:

Source: WO16045181A1 Disclosed are a moment sensing device of a middle-mounted motor of an electric bicycle, and a middle-mounted motor having the device. The moment sensing device comprises a middle axle going through a bottom bracket of a bicycle, a shaft sleeve sheathed on the middle axle and capable of deforming circumferentially under circumferential torsional force, and a crankset sheathed on the shaft sleeve; a moment sensing assembly capable of sensing the magnitude of the circumferential torsional force applied to the shaft sleeve is arranged on the shaft sleeve; and the moment sensing assembly is connected to a motor controller of the bicycle via a lead-out device which lead-out device is constituted by a movable magnetic core, a movable coil fixed on the movable magnetic core, a static magnetic core, and a static coil fixed on the static magnetic core. The moment sensing device in this invention has reliable performance, stable signal transmission, and low frictional loss. L'invention concerne un dispositif de detection de couple d'un moteur a montage central d'une bicyclette electrique, et un moteur a montage central equipe du dispositif. Le dispositif de detection de couple comprend un axe central passant a travers un support inferieur d'une bicyclette, un manchon d'arbre emmanche sur l'axe central et capable de se deformer de maniere circonfrentielle sous l'action d'une force de torsion circonfrentielle, et un pedaliier emmanche sur le manchon d'arbre. Un ensemble de detection de couple capable de detecter l'amplitude de la force de torsion circonfrentielle appliquee au manchon d'arbre est dispose sur le manchon d'arbre; et l'ensemble de detection de couple est connecte a un controleur de moteur de la bicyclette par l'intermediaire d'un dispositif de sortie, lequel est constitue d'un noyau magnetique mobile, d'une bobine mobile fixee sur le noyau magnetique mobile, d'un noyau magnetique statique et d'une bobine statique fixee sur le noyau magnetique statique. Le dispositif de detection de couple selon la presente invention presente des performances fiables, une transmission de signal stable et une faible perte de frottement.



International class (IPC 8-9): B62J99/00 B62M6/45 B62M6/50 B62M6/55 G01L3/00 G01L3/10 (Advanced/Invention)

CPC: B62M6/50 G01L3/00 B62M6/45

Family:

Publication number	Pub. date	Application number	App. date
CN104260818 A	20150107	CN201410498758	20140925
CN204368387 U	20150603	CN201420556641U	20140925
EP3199439 A1	20170802	EP20140902575	20141118
JP2017522232 T2	20170810	JP20170522704T	20141118
WO16045181 A1	20160331	WO2014CN091373	20141118

Priority: CN201410498758 20140925; CN201420556641U 20140925; WO2014CN091373 20141118;

Cited documents: WO14103212 A1, JP9105686 A2, JP2005308443 A2, JP2004170300 A2, JP2000335475 A2, JP10230893, EP1923683 A1, EP0807570 A1, CN204368387 U, CN203844937 U, CN203780726 U, CN203111431 U, CN201901236 U, CN201834167 U, CN103879506 A, CN103879505 A, CN101973357 A,

Assignee(s): (std): SUZHOU IND PARK TONGSHENG BICYCLE CO LTD ; SUZHOU INDUSTRIAL PARK TONGSHENG BICYCLE CO LTD

Assignee(s): SUZHOU INDUSTRIAL PARK TONGSHENG BICYCLE CO

Inventor(s): (std): MA QINGYI

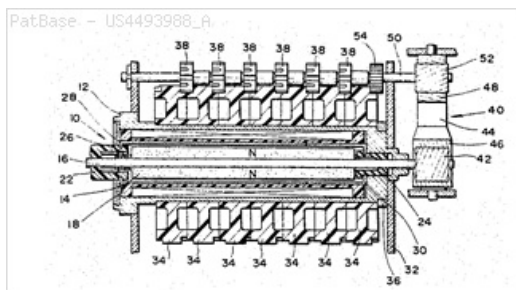
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW 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

22) Family number: 29582341 (US4493988A)

Title: Odometer using an electric motor disposed within annular figure wheels

Abstract:

Source: US4493988A In a highly compact odometer an electric motor which drives a mechanical display thereof, is disposed within the set of annular figure wheels used in the display and drivingly connected to said wheels through a worm and worm wheel drive train. In the case of integrated "total" and "trip" odometers a multipole rotor having a torque capacity adequate for driving both odometers is disposed within the set of figure wheels used for the "total" odometer display while the coil is disposed within the "trip" odometer set. Yokes extend between the sets of wheels to provide a magnetic connection between the coil and rotor. To prevent reversing of the odometer and gear chatter in the drive train a one-way clutch type bearing is used to support the output shaft of the electric motor.



International class (IPC 8-9): G01C22/00 G01C22/02 G06M1/00 G06M1/06 G06M1/10 (Advanced/Invention)
International class (IPC 1-7): G01C22/00 G01C22/02 G01P1/08 G06M1/00 G06M1/04 G06M1/10 G07C5/10
CPC: G01C22/02 G06M1/062 G06M1/102
European class: G01C22/02 G06M1/06B G06M1/10C
US class: 235/139R 235/96 235/98B 324/167 340/815.08 340/815.64 340/815.87 73/490
Family:

Publication number	Pub. date	Application number	App. date
DE3127141 A1	19820415	DE19813127141	19810709
DE3127141 C2	19831110	DE19813127141	19810709
FR2486647 A1	19820115	FR19810013717	19810710
FR2486647 B1	19850322	FR19810013717	19810710
GB2079459 A1	19820120	GB19810020483	19810702
GB2079459 B2	19840912	GB19810020483	19810702
JP2015162 Y2	19900424	JP19800097936U	19800711
JP57020611 U1	19820202	JP19800097936U	19800711
JP57137059 U1	19820826	JP19810020297U	19810216
JP57161074 U1	19821009	JP19810048178U	19810403
JP63008997 Y2	19880317	JP19810020297U	19810216
US4493988 A	19850115	US19810275713	19810622

Priority: JP19800097936U 19800711; JP19810020297U 19810216; JP19810048178U 19810403;

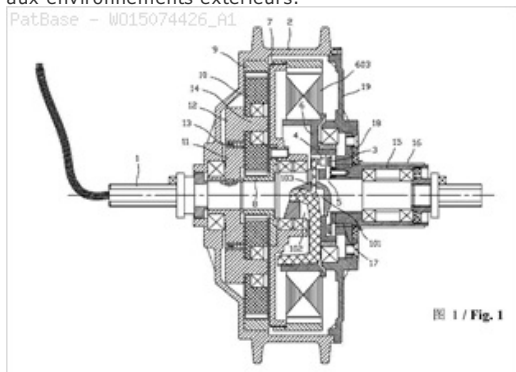
Cited documents: US3935996 A, US3909646 A, US3659780 A, US3541363 A, US2375383 A, US2074066 A, US1252622 A, JP55035480 U1, JP51018686 U1, JP51018685 U1, JP51002627 U1, GB802955 A, FR1460749 A, EP0024647 A1, DE1215411 B, DE1192428 B,
Assignee(s): (std): KANTO SEIKI CO ; KANTO SEIKI CO LTD
Assignee(s): KANTO SEIKI CO LTD OMIYA SAITAMA JP ; KANTO SEIKI CO LIMITED
Inventor(s): (std): ICHIMURA ETSUO
Inventor(s): ICHIMURA ETSUO OMIYA JP ; ETSUO ICHIMURA

23) Family number: 55828741 (WO15074426A1)

Title: WHEEL HUB MOTOR AND METHOD FOR USING SAME MOTEUR DE MOYEU DE ROUE ET SON PROCEDE D'UTILISATION

Abstract:

Source: WO15074426A1 A wheel hub motor. A plurality of annularly distributed magnetic steels and at least two Hall elements are arranged in the housing of the wheel hub. The magnetic steels rotate synchronously with a rotating base, and the rotating base rotates synchronously with a crank chain wheel; the hall elements are fixed near the magnetic steels, and the signal output ends of the Hall elements are connected to a controller of the wheel hub motor. After the wheel hub motor is mounted on a bicycle, the controller controls the wheel hub motor to work when the bicycle rider pedals the bicycle forwards, controls the wheel hub motor to stop working when the bicycle rider stops pedaling the bicycle, and controls the wheel hub motor to stop working when the bicycle rider pedals the bicycle backwards. Thus, in an electric bicycle equipped with the wheel hub motor, there is no need of mounting a power assisting sensor between a bicycle frame and a crank chain wheel, facilitating the mounting of the entire bicycle and also avoiding the situation where the power assisting sensor is damaged due to the exposure thereof to exterior environments. L'invention concerne un moteur de moyeu de roue. une pluralite d'elements en acier a aimant distribues de facon annulaire et au moins deux elements a effet Hall sont disposes dans le carter du moyeu de roue. Les elements en acier a aimant tournent de maniere synchrone avec une base rotative et la base rotative tourne de maniere synchrone avec une poulie a chaine de manivelle; les elements a effet Hall sont fixes a proximite des elements en acier a aimant et les extremités de sortie de signal des elements a effet Hall sont raccordees a un controleur du moteur de moyeu de roue. Apres avoir monte le moteur de moyeu de roue sur une bicyclette, le controleur commande le moteur de moyeu de roue pour qu'il fonctionne lorsque le cycliste pedale vers l'avant sur la bicyclette, commande le moteur de moyeu de roue pour qu'il s'arrete de fonctionner lorsque le cycliste arrete de pedaler et commande le moteur de moyeu de roue pour qu'il s'arrete de fonctionner lorsque le cycliste pedale vers l'arriere sur la bicyclette. Ainsi, il n'est pas necessaire sur une bicyclette electrique equipee du moteur de moyeu de roue de monter un capteur d'assistance de propulsion entre un cadre de bicyclette et un pignon a chaine de manivelle, ce qui facilite le montage de la bicyclette dans son ensemble et evite egalement la situation dans laquelle le capteur d'assistance de propulsion est endommage en raison de son exposition aux environnements exterieurs.



International class (IPC 8-9): H02K11/00 H02K11/20 H02K11/215 H02K21/12 (Advanced/Invention);
H02K7/116 H02K7/118 (Advanced/Non-invention)
CPC: H02K11/215 H02K7/116 H02K7/118 H02K21/12
Family:

Publication number	Pub. date	Application number	App. date
CN103607075 A	20140226	CN201310583566	20131119
CN103607075 B	20160427	CN201310583566	20131119
CN203617848 U	20140528	CN201320737056U	20131119
EP3073620 A1	20160928	EP20140863416	20140703
EP3073620 A4	20170712	EP20140863416	20140703
WO15074426 A1	20150528	WO2014CN081543	20140703

Priority: CN201310583566 20131119; CN201320737056U 20131119; WO2014CN081543 20140703;

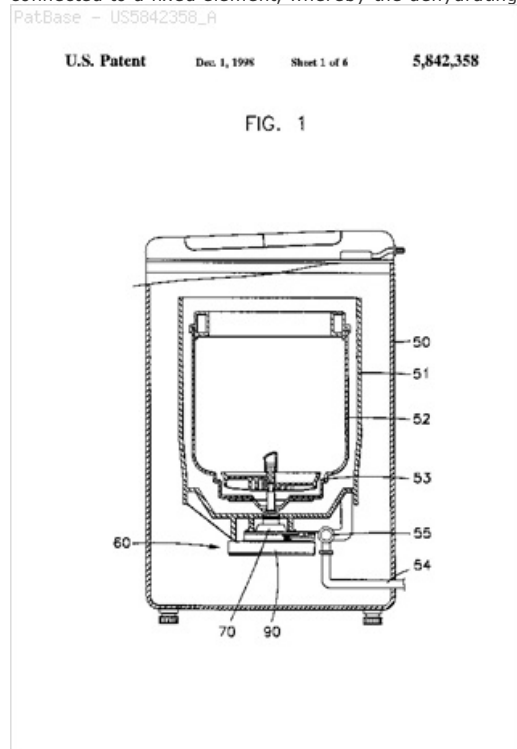
Cited documents: WO12125165 A1, EP0610767 A2, CN2456360 Y, CN203617848 U, CN202435192 U, CN202260955 U, CN202004594 U, CN201478931 U, CN201051694 Y, CN103607075 A, CN102983671 A, CN102148557 A, CN101989801 A,
Assignee(s): (std): NINGBO YINZHOU HENGTAI ELECTROMECHANICAL CO LTD
Assignee(s): ELECTRICAL CO LTD NINGBO HENGTAI ; NINGBO YINZHOU HENGTAI ELECTROMECHANICAL CO
Inventor(s): (std): LI AICHUN ; ZHANG JIANCHUN
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

24) Family number: 11279146 (US5842358A)

Title: Power system of clothes washing machine

Abstract:

Source: US5842358A A clothes washing machine includes a water tub, a spin basket, and a clothes agitator. A vertical dehydrating shaft is fixed to the spin basket, and a laundering shaft extends coaxially within the dehydrating shaft. Upper and lower ends of the laundering shaft are connected to the agitator and a motor respectively, whereby rotation of the motor is always transmitted to the agitator. In order to selectively connect the dehydrating shaft to the laundering shaft (e.g., during a spin-drying operation), a connecting gear is mounted on the dehydrating shaft for rotation therewith and for vertical movement relative thereto. A power-driven actuator is provided for selectively moving the connecting gear up or down. When the connecting gear moves down, lower teeth thereon become operably connected to the motor so that the dehydrating shaft and laundering shaft rotate together. During a washing or rinsing operation, the connecting gear is moved up, whereby upper teeth thereon become connected to a fixed element, whereby the dehydrating shaft is fixed against rotation.



International class (IPC 8-9): D06F37/36 D06F37/40 F16D11/14 (Advanced/Invention);

D06F37/40 (Advanced/Non-invention);

D06F37/30 F16D11/00 (Core/Invention)

International class (IPC 1-7): D06F29/02 D06F33/00 D06F37/36 D06F37/40 F16D11/14 H02K7/14

CPC: D06F37/40 F16D11/14

European class: D06F37/40 F16D11/14

US class: 68/23.7

Family:

Publication number	Pub. date	Application number	App. date
CN1099492 C	20030122	CN19971012711	19970611
CN1168935 A	19971231	CN19971012711	19970611
DE19724895 A1	19971218	DE19971024895	19970612
DE19724895 C2	20000120	DE19971024895	19970612
GB2314092 A1	19971217	GB19970011491	19970605
GB2314092 B2	19980805	GB19970011491	19970605
GB9711491 A0	19970730	GB19970011491	19970605
JP10052595 A2	19980224	JP19970154159	19970611
JP2993913 B2	19991227	JP19970154159	19970611
KR100207073 B1	19990715	KR19960021109	19960612
KR19980002385 A	19980330	KR19960021109	19960612
MY117576 A	20040731	MY19970002483	19970604
US5842358 A	19981201	US19970870905	19970606

Priority: KR19960021109 19960612;

Cited documents: US5586455 A, US5551262 A, US4969341 A, US4291556 A, US2826056 A, US2610498 A, US2609697 A, JP8323093, GB2287960 A1,

Assignee(s): (std): SAM SUNG ELECTRONIC ; SAMSUNG ELECTRONIC ; SAMSUNG ELECTRONICS CO LTD

Assignee(s): SAMSUNG ELECTRONICS CO LIMITED ; SAMSUNG ELECTRONICS CO LTD SUWON KYUNGKI KR ; SAMSUNG ELECTRONICS CO LTD SUWON ; SAMSUNG ELECTRONICS CO ; SAMSUNG ELECTRON CO LTD

Inventor(s): (std): KOO HYONG MO ; KOO HYOUNG MO ; LEE MIN SOO ; MIN SOO LEE ; KYOUNG MO KOO

Inventor(s): LEE MIN SOO KYUNGI KR ; HYOUNG MO KOO ; KOO HYOUNG MO KYUNGKI KR ; KOO KYOUNG MO

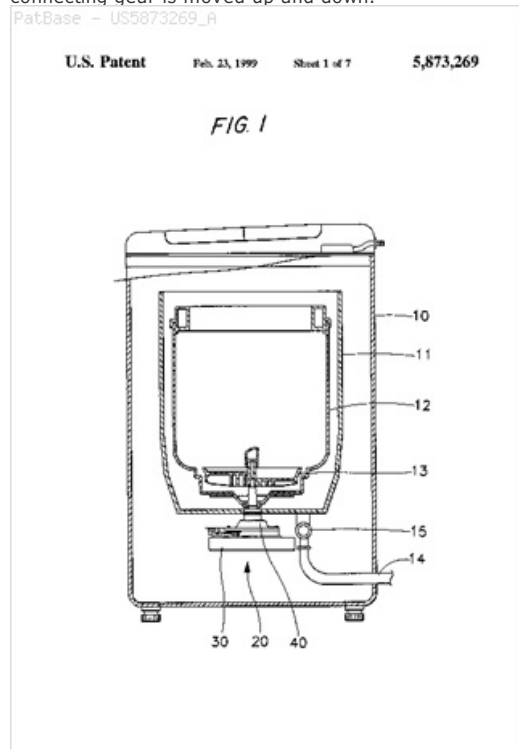
25) Family number: 11059465 (US5873269A)

Title: Power system of washing machine

Abstract:

Source: US5873269A A clothes washing machine includes a water tub, a spin basket, and a clothes agitator. A vertical dehydrating shaft is fixed to

the spin basket, and a laundering shaft extends coaxially within the dehydrating shaft. Upper and lower ends of the laundering shaft are connected to the agitator and a motor respectively, whereby rotation of the motor is always transmitted to the agitator. In order to selectively connect the dehydrating shaft to the laundering shaft (e.g., during a spin-drying operation), a connecting gear is mounted on the dehydrating shaft for rotation therewith and for vertical movement relative thereto. A power-driven actuator is provided for selectively moving the connecting gear up or down. When the connecting gear moves down, lower teeth thereon become operably connected to the motor so that the dehydrating shaft and laundering shaft rotate together. During a washing or rinsing operation, the connecting gear is moved up, whereby upper teeth thereon become connected to a fixed element, whereby the dehydrating shaft is fixed against rotation. One of the upper teeth, and one of the lower teeth, of the connecting gear is longer than the other teeth to guide the connecting gear into meshing relationship with other sets of teeth when the connecting gear is moved up and down.



International class (IPC 8-9): D06F37/30 D06F37/40 (Advanced/Invention);

D06F37/40 (Advanced/Non-invention);

D06F37/30 (Core/Invention)

International class (IPC 1-7): D06F23/04 D06F37/30 D06F37/34 D06F37/40 F16D11/14

CPC: D06F37/304 Y02B40/52

European class: D06F37/30C Y02B40/52

US class: 68/23.7

Family:

Publication number	Pub. date	Application number	App. date
CN1099491 C	20030122	CN19971021218	19971027
CN1191252 A	19980826	CN19971021218	19971027
DE19750934 A1	19980827	DE19971050934	19971117
DE19750934 C2	20030327	DE19971050934	19971117
GB2324309 A1	19981021	GB19970022973	19971030
GB2324309 B2	19990526	GB19970022973	19971030
GB9722973 A0	19980107	GB19970022973	19971030
JP10230092 A2	19980902	JP19970308499	19971111
JP2993922 B2	19991227	JP19970308499	19971111
KR100229134 B1	19991101	KR19970004855	19970218
KR19980068332 A	19981015	KR19970004855	19970218
US5873269 A	19990223	US19970972576	19971118

Priority: KR19970004855 19970218;

Cited documents: US5586455 A, US5172573 A, US4371067 A, US4291556 A, US2699682 A, US2609697 A, GB2287960 A1,

Assignee(s): (std): SAM SUNG ELECTRONIC ; SAMSUNG ELECTRONIC ; SAMSUNG ELECTRONICS CO LTD

Assignee(s): SAMSUNG ELECTRONICS CO LTD SUWON KYUNGKI KR ; SAMSUNG ELECTRONICS CO ; SAMSUNG ELECTRONICS CO LIMITED ; SAMSUNG ELECTRON CO LTD

Inventor(s): (std): CHOI HWAN YOUNG ; HONG MIN PYO ; HWAN YOUNG CHOI ; KO BINSHAKU ; MIN PYO HONG ; SAI KANEI

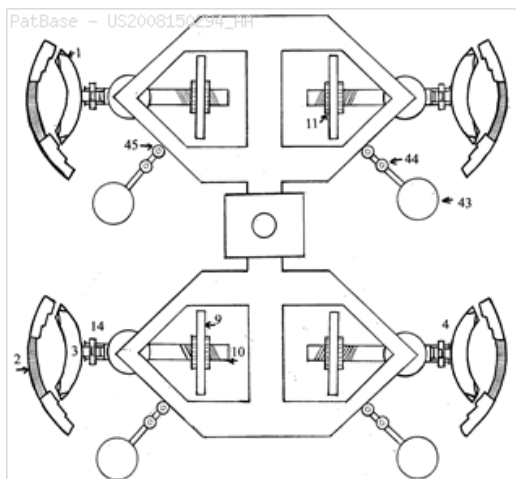
Inventor(s): HONG MIN PYO SUWON KYUNGKI KR ; CHOI HWAN YOUNG ANYANG KYUNGKI KR

26) Family number: 41951167 (US2008150294A)

Title: CENTRIFUGALLY ACTIVE VARIABLE MAGNETIC FLUX ALTERNATOR

Abstract:

Source: US2008150294A Today modern large commercial wind turbines enable large quantities of electrical power diverted from the wind. The short comings are that they need a pitch control mechanism to turn the turbine blades to capture to wind at different angles on the surface area of the blades. This is feature is mostly due to the inadequacies of the conventional generator technology. The Centrifugally Active Variable Flux Generator features moveable permanent magnets that enable variable magnetic flux control that can automatically control the amount of magnetic flux to the stators by the annular velocity of the rotors, therefore control the amount of output electrical power in different wind speeds without the need for a pitch control system on the blades. Modern wind turbines have pitch control system needed to keep the wind turbine operating in the proper rotor speed for efficiency. The present invention enables a wind turbine to be fitted with a fixed turbine blade without the need of a pitch control system. This will allow for reduction in manufacturing cost and repairs from the much economical blade design.



International class (IPC 8-9): F03D9/00 H02K1/27 H02K16/00 H02K7/02 H02K9/19 H02P9/04 (Advanced/Invention); F03D9/00 H02K1/27 H02K16/00 H02K7/00 H02K9/19 H02P9/04 (Core/Invention)

CPC: F05B2220/7068 H02K16/00 Y02E10/725 Y02P70/523 F03D9/25 F03D80/70 H02K21/025

European class: F03D9/00C H02K21/02M2T H02K7/18A2W R05B220/7068 T02K16/00 Y02E10/72H

US class: 290/44 290/55 310/114 310/156.01 310/54 310/74

Family:

Publication number	Pub. date	Application number	App. date
US2008150294 AA	20080626	US20070998378	20071128

Priority: US20060861698P 20061129; US20070998378 20071128;

Assignee(s): (std): JONES STEVEN MARK

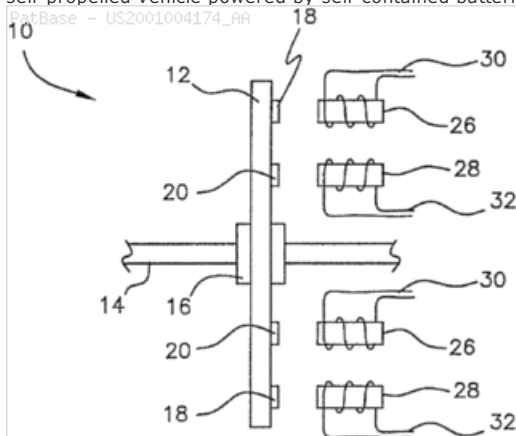
Inventor(s): (std): JONES STEVEN MARK

27) Family number: 30975881 (US2001004174A)

Title: MAGNETICALLY DRIVEN WHEEL FOR USE IN RADIAL/ROTARY PROPULSION SYSTEM HAVING AN ENERGY RECOVERY FEATURE

Abstract:

Source: US2001004174A The radial/rotary propulsion system of the present invention features a flywheel having concentric rings of permanent magnets attached to one or both sides. These permanent magnets interact with DC powered electromagnets which, when selectively energized, impart rotary motion to the flywheel. By arranging the permanent magnets in concentric rings, better control of both speed and torques may be obtained. In addition, in a regenerative mode, inertia of the flywheel is reconverted to electrical energy by either additional permanent magnet/coil combinations or through the switching of the electromagnet coils normally used for rotating the flywheel. In alternated embodiments, regeneration is accomplished with alternators interacting with other magnets of the flywheel. The regenerative mode is also helpful in braking the flywheel as its inertial energy is converted to electrical energy. The energy recapture feature is particularly useful when the flywheel is utilized in a self-propelled vehicle powered by self-contained batteries.



International class (IPC 8-9): B60K1/00 H02K1/27 H02K21/24 H02K31/00 H02K47/20 H02K7/02 H02K7/09 H02K7/14 H02P1/18 H02P1/24 (Advanced/Invention); H02K21/12 H02K7/00 H02K7/14 (Core/Invention)

International class (IPC 1-7): G06F13/00 H02K1/27 H02K16/04 H02K21/24 H02K23/54 H02K47/20 H02K7/02 H02K7/09 H02P1/18 H04B10/24

CPC: H02K7/02 H02K7/025 H02K7/14 H02K21/24 H02K49/102 Y02E60/16

European class: H02K21/24 H02K49/10B H02K7/02 H02K7/02B H02K7/14 Y02E60/16

US class: 180/65.1 180/65.100S 180/65.5 180/65.51 290/40.00CS 290/40C 310/113 310/113P 310/156.32 310/178 310/268 310/68B 310/74 310/74P 318/140 318/150 318/254 318/400.31 318/498 318/725 322/4 322/4S 709/201 714/16

Family:

Publication number	Pub. date	Application number	App. date
US2001004174 AA	20010621	US20010771662	20010130
US2005127767 AA	20050616	US20050045261	20050131
US6397352 BA	20020528	US19990256847	19990224
US6849984 BB	20050201	US20010771662	20010130
US7105972 BB	20060912	US20050045261	20050131
WO6086000 A2	20060817	WO2005US26206	20050722
WO6086000 A3	20061123	WO2005US26206	20050722

Priority: US19980103898P 19981013; US19990256847 19990224; US19990265847 19990310; US20010771662 20010130; US20050045261 20050131;

Cited documents: US6849984 BB, US6849984 BA, US6630806 BA, US6606578 BA, US6392370 BA, US6323576 BA, US6275852 BA, US6167137 A, US6091734 A, US6026165 A, US5786645 A, US5719458 A, US5600191 A, US5514923 A, US5428282 A, US5330026 A, US5258697 A, US5191255 A, US5179307 A, US5164623 A, US4922145 A, US4211945 A, US4179633 A, US4042056 A, US3832581 A, US3566165 A, US2005127767 AA, GB962322 A, GB2229866 A1,

Assignee(s): (std): GALLANT RAYMOND J ; ORACLE CORP

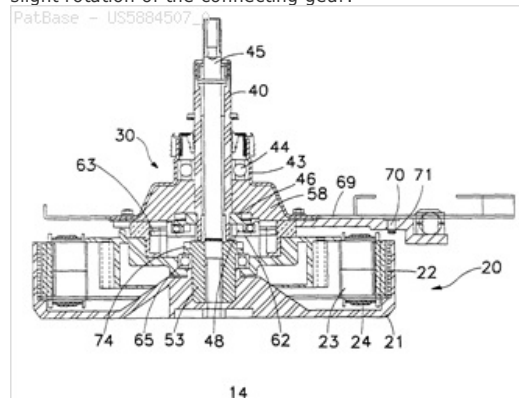
Assignee(s): ORACLE INT ; ORACLE INT CORP ; GALLANT RAYMOND JOSEPH
Inventor(s): (std): CHANDRASEKARAN SASHIKANTH ; GALLANT RAYMOND J ; SAXENA ASHOK R ; GALLANT RAYMOND JOSEPH
Inventor(s): GALLANT RAYMOND
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

28) Family number: 15254667 (US5884507A)

Title: Clothes washing machine having drive transmission with meshable gears

Abstract:

Source: US5884507A A washing machine includes a water tub, a spin basket mounted inside the water tub, and a pulsator mounted in the spin basket. A drive transmission includes a hollow dehydrating shaft and a laundering shaft disposed coaxially therein. The hollow dehydrating shaft is connected to the spin basket, and the laundering shaft is connected to the pulsator. A connecting gear is mounted on the dehydrating shaft for vertical movement therealong. In an upper position, the connecting gear meshes with fixed teeth to prevent the spin basket from rotating. In a lower position, the connecting gear causes the laundering shaft and dehydrating shaft to be interconnected for common rotation. The connecting gear is rotatable slightly relative to the laundering shaft to accommodate meshing of gear teeth in response to upper and lower movement of the connecting gear. Springs are provided which act between the dehydrating shaft and the connecting gear and which are yieldable to permit the slight rotation of the connecting gear.



International class (IPC 8-9): D06F37/30 D06F37/40 (Advanced/Invention);
D06F37/40 (Advanced/Non-invention);
D06F37/30 (Core/Invention)
International class (IPC 1-7): D06F23/04 D06F37/30 D06F37/40 F16D11/14
CPC: D06F37/304
European class: D06F37/30C
US class: 68/23.7
Family:

Publication number	Pub. date	Application number	App. date
CN1084408 C	20020508	CN19971022621	19971202
CN1191910 A	19980902	CN19971022621	19971202
DE19752879 A1	19980827	DE19971052879	19971128
DE19752879 C2	20030320	DE19971052879	19971128
GB2322636 A1	19980902	GB19970025756	19971204
GB2322636 B2	20010131	GB19970025756	19971204
GB9725756 A0	19980204	GB19970025756	19971204
JP10235077 A2	19980908	JP19970341597	19971211
JP2935684 B2	19990816	JP19970341597	19971211
KR100233427 B1	19991201	KR19970006029	19970226
KR19980069122 A	19981026	KR19970006029	19970226
US5884507 A	19990323	US19970995935	19971222

Priority: KR19970006029 19970226;

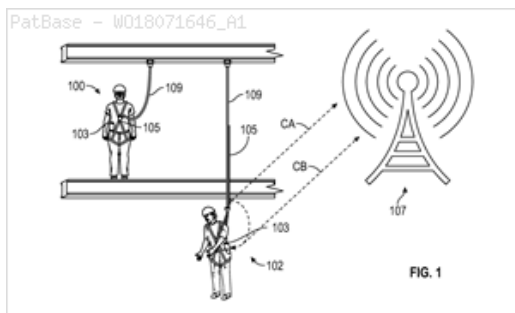
Cited documents: US5651277 A, US5586455 A, US5172573 A, US2699682 A, US2609697 A, GB2287960 A1,
Assignee(s): (std): SAM SUNG ELECTRONIC ; SAMSUNG ELECTRONIC ; SAMSUNG ELECTRONICS CO LTD
Assignee(s): SAMSUNG ELECTRONICS CO LIMITED ; SAMSUNG ELECTRONICS CO LTD SUWON KYUNGKI KR ; SANSEI DENSHI KK ; SAMSUNG ELECTRONICS CO ; SAMSUNG ELECTRON CO LTD
Inventor(s): (std): LEE MIN SU ; HWAN YOUNG CHOI ; LEE MIN SOO ; MIN SOON LEE ; CHOI HWAN YOUNG
Inventor(s): LEE MIN SOON ; LEE MIN SOO KYUNGKI KR ; MIN SOO LEE ; RI MINSHU ; SAI KANEI ; CHOI HWAN YOUNG KYUNGKI KR

29) Family number: 69341878 (WO18071646A1)

Title: METHODS AND APPARATUS FOR GENERATING ENERGY USING FALL PROTECTION DEVICES PROCEDES ET APPAREIL POUR GENERER DE L'ENERGIE AU MOYEN DE DISPOSITIFS DE PROTECTION CONTRE LES CHUTES

Abstract:

Source: WO18071646A1 A fall protection device comprises an energy harvester to generate electrical power in response to movement of an elongate member and a circuit powered by the generated electrical power; an impact indicator connected to an elongate member, a controller connected to the elongate member and / or the impact indicator to generate a message in response to impact, and a transmitter connected to the controller to transmit the message; and / or a sensor connected to an elongate member and a controller connected to the sensor to generate a message in response to movement of the elongate member. The fall protection device could include a generator to generate electrical power, an energy storage capacitor to store the generated electrical power, a controller powered by the energy storage capacitor to generate a message in response to action, and a wireless transmitter powered by the energy storage capacitor to transmit the message. La presente invention concerne un dispositif de protection contre les chutes qui comprend un collecteur d'energie pour generer de l'energie electrique en reponse au deplacement d'un element allonge et un circuit alimente par l'energie electrique generee; un indicateur de choc connecte a un element allonge, un dispositif de commande connecte a l'element allonge et/ou a l'indicateur de choc pour generer un message en reponse a un choc, et un emetteur connecte au dispositif de commande pour transmettre le message; et/ou un capteur connecte a un element allonge et un dispositif de commande connecte au capteur pour generer un message en reponse au deplacement de l'element allonge. Le dispositif de protection contre les chutes peut comprendre un generateur pour generer de l'energie electrique, un condensateur de stockage d'energie pour stocker l'energie electrique generee, un dispositif de commande alimente par le condensateur de stockage d'energie pour generer un message en reponse a une action, et un emetteur sans fil alimente par le condensateur de stockage d'energie pour transmettre le message.



International class (IPC 8-9): A62B1/00 A62B35/00 A62B35/04 E04G21/00 F03G5/04 (Advanced/Invention)

CPC: A62B35/00 E04G21/00 F03G5/04 F03G5/06

Family:

Publication number	Pub. date	Application number	App. date
TW201818998 A	20180601	TW20170135209	20171013
WO18071646 A1	20180419	WO20170556307	20171012

Priority: US20160408194P 20161014;

Cited documents: US2010282541 AA, US2010231402 AA, US2010219016 AA, US2009089108 AA, US2008157531 AA,

Assignee(s): (std): 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M CO

Inventor(s): (std): BLACKFORD MATTHEW ; ESCH JAY ; HU JIA ; JESME RONALD ; FERRARO JARED ; KNUDSON ORLIN ; RENEBERG JONATHAN

Inventor(s): RENEBERG JONATHAN E ; RENEBERG JONATHAN EARL ; KNUDSON ORLIN B ; KNUDSON ORLIN BRUCE ; FERRARO JARED C ; FERRARO

JARED CLAYE ; JESME RONALD D ; JESME RONALD DAVID ; ESCH JAY A ; ESCH JAY ARTHUR ; BLACKFORD MATTHEW J ; BLACKFORD MATTHEW JAMES

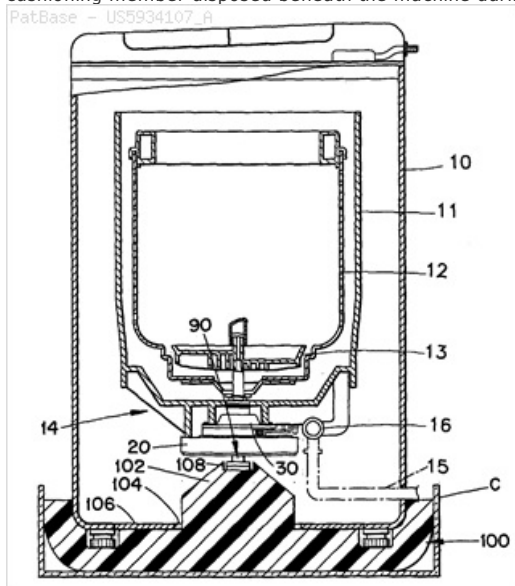
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN 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

30) Family number: 11059472 (US5934107A)

Title: Clothes washing machine having an impact damper

Abstract:

Source: US5934107A A washing machine includes a water tub, a spin basket mounted inside the water tub, a pulsator mounted in the spin basket, a reversible motor mounted under the water tub for driving the pulsator and spin basket, and a damping device for damping external impacts applied to the motor. The damping device is mounted to an underside of the motor and is received in a recess formed in an upper end of a cushioning member disposed beneath the machine during shipment to stabilize the motor.



International class (IPC 8-9): D06F37/20 D06F37/24 D06F37/40 D06F37/42 D06F39/12 (Advanced/Invention);

D06F37/24 D06F37/40 (Advanced/Non-invention);

D06F37/00 D06F37/20 D06F37/30 D06F39/12 (Core/Invention)

International class (IPC 1-7): B65D81/113 B65D85/68 D06F35/00 D06F37/24 D06F37/40 D06F37/42

CPC: D06F37/20 D06F39/001 D06F39/12

European class: D06F37/20 D06F39/00B D06F39/12

US class: 206/320 68/23.3 68/3.00R 68/3R

Family:

Publication number	Pub. date	Application number	App. date
JP10230095 A2	19980902	JP19970348298	19971217
JP2988899 B2	19991213	JP19970348298	19971217
KR100229136 B1	19991101	KR19970004859	19970218
KR19980068336 A	19981015	KR19970004859	19970218
US5934107 A	19990810	US19980025304	19980218

Priority: KR19970004859 19970218;

Cited documents: US4366902 A, US3268082 A, US3216225 A, US3132098 A, US2879655 A, US2703974 A, JP53133194 A2, JP4128159 A2,

Assignee(s): (std): SAM SUNG ELECTRONIC ; SAMSUNG ELECTRONIC ; SAMSUNG ELECTRONICS CO LTD

Assignee(s): SANSEI DENSHI KK ; SAMSUNG ELECTRONICS CO ; SAMSUNG ELECTRON CO LTD

Inventor(s): (std): CHOI HWAN YOUNG ; LEE MIN SOO ; LEE MIN SU ; SAI KANEI

Inventor(s): RI MINSHU

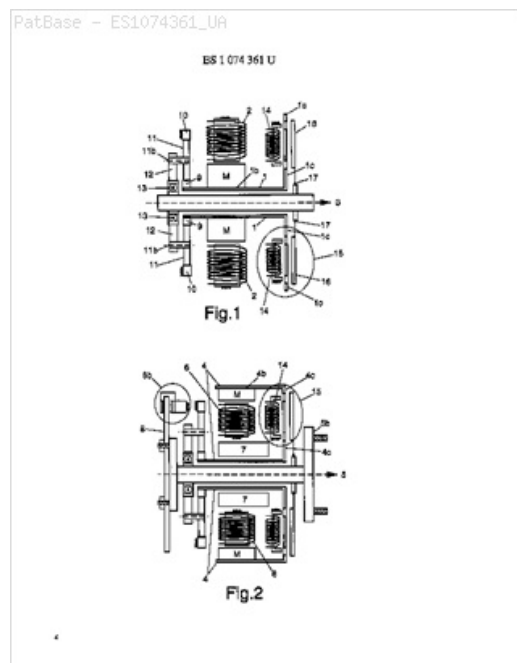
31) Family number: 48763114 (ES1074361U)

Title: MOTOR ELECTRICO CON REDUCTOR COAXIAL INTEGRADO Y ELECTROMAGNETICAMENTE INHIBIBLE. ELECTRIC MOTOR REDUCER inhibitable integrated coaxial and electromagnetically. (Machine translation)

Abstract:

Source: ES1074361U 1. Motor electrico con reductor coaxial integrado y electromagneticamente inhibible, que se caracteriza por lo siguiente: A) tiene dos ejes concenricos: uno de ellos, el mas exterior, que es el motriz, y el interior o central, que es el de salida y de mayor longitud que el motriz por sobresalir por sus dos extremos. B) del inducido o rotor del motor, sea este interno o externo respecto al estator o bobinas (2 o 6), su eje-motriz (1 o 4) es hueco con el fin de permitir girar en su interior al eje de salida (3 o 5). C) el eje-motriz hueco esta ademas solidamente unido en su parte trasera a un engranaje o "pinon-sol" (9) que es el central de un reductor de velocidad tipo planetario de corona fija (10). D) el pinon-sol (9) es tambien hueco en su centro para permitir que el referido eje concentrico de salida (3 o 5) pase por su centro y gire libremente. E) el eje central de salida hace en su parte posterior de centro de giro del "porta-planetarios" (12) de dicho reductor sin que el porta-planetarios mismo vaya solidamente unido a el, sino que lo hace a traves de un rodamiento unidireccional de los llamados "rueda-libre" (13), que cuando la fuerza motriz procede del porta-planetarios dicho rodamiento unidireccional la transmite a ese eje de salida (3 o 5) pero permitiendole tambien a este girar mas rapidamente en el mismo sentido. F) en la cara o extremo frontal de este motor, extremo este opuesto al del reductor planetario, hay un conjunto embrague-unidor electromagnetico (15) compuesto por un plato (1c o 4c) fijado al eje motriz (1 o 4) y otro plato (16) que va fijado elasticamente al eje central en (17), de tal modo que al aplicarle energia electrica a la bobina (14) de dicho embrague electromagnetico, hace que se unan los dos platos con el fin de inhibir la transferencia de la energia proveniente del reductor planetario, y producir una transferencia directa del eje-motriz (1 o 4) al eje de salida (3 o 5). 2. Motor electrico con reductor coaxial integrado y electromagneticamente inhibible, que acorde con la reivindicacion anterior, esta caracterizado porque opcionalmente en la parte trasera, ademas puede incorporar otro embrague electromagnetico con el fin de que, activando este, y previa desactivacion del frontal (15) pueda cumplir su funcion el reductor planetario (9, 10, 11 y 12) cuando se desee obtener alto par en ambos sentidos de giro del inducido o rotor; pudiendo este segundo embrague complementar o sustituir al rodamiento unidireccional (13). 3. Motor electrico con reductor coaxial integrado y electromagneticamente inhibible, que de modo acorde con solo la primera reivindicacion o con ambas reivindicaciones anteriores, esta caracterizado porque opcionalmente fijado al eje central de salida (3 o 5), incorpora un mecanismo de freno mecanico (8 y 8b) accionable este por cualquier sistema que permita dejar frenado tal eje de salida sin necesidad de desgaste de energia.

Machine translation: 1. Electric motor with integrated coaxial gear and inhibitable electromagnetically, characterized by the following: A) has two concentric shafts, one of them, the outermost, that is the motor, and the inner or central, is the outlet and longer than the drive by its two extremos. B protrude) of the armature or rotor of the motor, whether internal or external to the stator or coils (2 or 6), its axis-motor (1 or 4) is hollow with the allow rotate inside the output shaft (3 or 5). C) the hollow drive shaft, this also solidly attached at its rear to a pinion gear or sun" (9) which is central a speed reducer planetary type of fixed crown (10). D) the pinon-sun (9) is also hollow in the center to allow the said concentric shaft output (3 or 5) through its center and rotates freely. E) the central axis output on the back makes the center of rotation of the planetary carrier " (12) of said gear without the same planetary carrier go solidly attached to it, but does so through a unidirectional bearing wheel-called free" (13), when the driving force that proceeds from said planetary carrier unidirectional bearing that transmits output shaft (3 or 5) but this also allowing faster turn on the sentido. F same) on the face or front end of the motor, the opposite end of the planetary gear, a set-joiner electromagnetic clutch (15) comprises a plate (1c or 4c) attached to the drive shaft (1 or 4) and another plate (16) which is fixed resiliently to the central axis (17), so that by applying electric power to the coil (14) of said electromagnetic clutch makes joining the two plates to inhibit the transfer of energy from the planetary gear, and produce a download-motor shaft (1 or 4) to the output shaft (3 or 5) 2. Electric motor with integrated coaxial and electromagnetically reducer inhibitable that according to the previous claim, is characterized because the rear optionally, may also incorporate other electromagnetic clutch to which, by activating this, and after deactivation of the front (15) can fulfill its function the planetary gear (9, 10, 11 and 12) when high torque is desired in both directions of rotation of the armature or rotor, the second clutch may supplement or replace the unidirectional bearing (13) 3. Electric motor with integrated coaxial gear and inhibitable electromagnetically, so that according to the first claim alone or both preceding claims, characterized in that optionally is secured to the central outlet shaft (3 or 5), incorporates a mechanical brake mechanism (8 and 8b) operated this for any braking system to stop such output shaft without waste of energy.



International class (IPC 8-9): H02K21/00 (Advanced/Invention)

CPC: Y02T10/641

European class: Y02T10/64B

Family:

Publication number	Pub. date	Application number	App. date
ES1074361 UA	20110419	ES20110000220U	20110307
ES1074361 Y1	20110715	ES20110000220U	20110307

Priority: ES20110000220U 20110307;

Assignee(s): (std): SANZ ARAPILES JESUS PEDRO

Inventor(s): (std): SANZ ARAPILES JESUS PEDRO

32) Family number: 52846661 (CN102882305A)

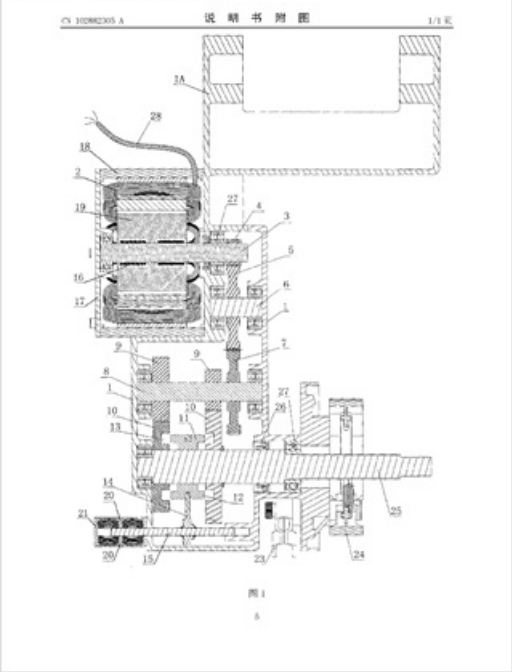
Title: ONE-WAY CLUTCH MOTOR

Abstract:

Source: CN102882305A The invention belongs to the technical field of power transmission of electric vehicles, solves the problem that the electric vehicle slides and discloses a one-way clutch motor. The one-way clutch motor comprises a motor end cover, wherein the motor end cover is connected to a motor shell, a coil stator is fixed in the motor shell, and a rotor body is arranged in the coil stator; and the one-way clutch motor is

characterized in that a one-way bearing is arranged between the rotor body and a motor shaft; and the rotor body, the one-way bearing and the motor shaft form a one-way drive transmission mechanism.

PatBase - CN102882305_A



International class (IPC 8-9): H02K7/08 (Advanced/Invention)
CPC: Y02T10/641
Family:

Publication number	Pub. date	Application number	App. date
CN102882305 A	20130116	CN201110204697	20110711

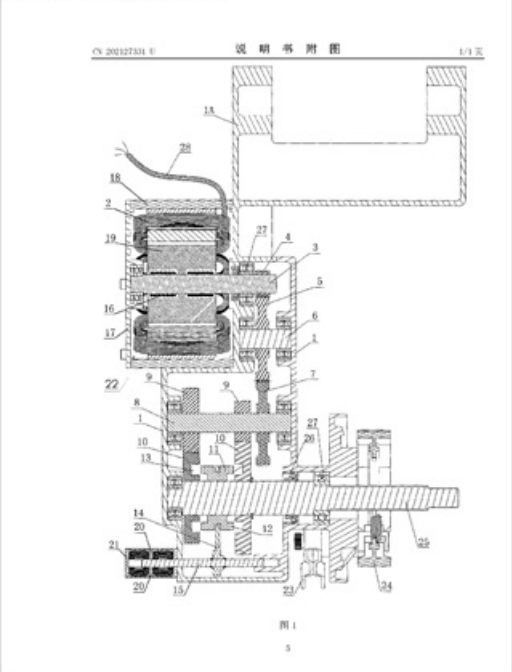
Priority: CN201110204697 20110711;

Assignee(s): (std): CAI XUYANG
Inventor(s): (std): CAI GUIXI

33) Family number: 50544649 (CN202127331U)
Title: One-way clutch motor

Abstract:
Source: CN202127331U The utility model belongs to the technical field of power transmission of an electric vehicle and solves the problem of sliding of the electric vehicle. A one-way clutch motor comprises a motor end cover. The motor end cover is connected on a motor shell. A coil stator is fixed in the motor shell. A rotor body is arranged in the coil stator. The one-way clutch motor is characterized in that a one-way bearing is arranged between the rotor body and a motor shaft; and a one-way driving transmission mechanism is formed by the rotor body, the one-way bearing and the motor shaft.

PatBase - CN202127331_U



International class (IPC 8-9): H02K7/10 (Advanced/Invention)
CPC: Y02T10/641
European class: Y02T10/64B
Family:

Publication number	Pub. date	Application number	App. date
CN202127331 U	20120125	CN201120261511U	20110711

Priority: CN201120261511U 20110711;

Assignee(s): (std): CAI XUYANG

Inventor(s): (std): GUIXI CAI

Inventor(s): CAI GUIXI

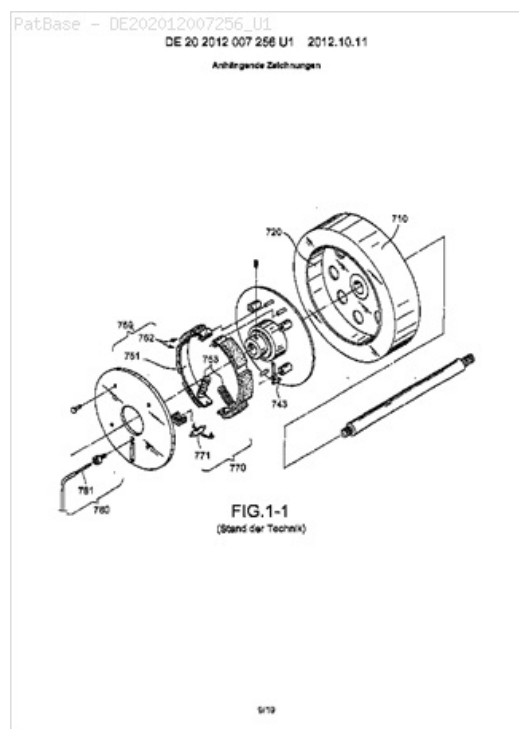
34) Family number: 52065715 (DE202012007256U1)

Title: Permanentmagnet-Wirbelstrombremse mit integrierter Stromerzeugungsfunktion Permanent magnet eddy current brake with integrated power generation function (Machine translation)

Abstract:

Source: DE202012007256U1 Permanentmagnet-Wirbelstrombremse mit integrierter Stromerzeugungsfunktion, die fuer Fitnessgeraete konzipiert ist, aufweisend: einen Befestigungsschaft (10), der beiderseitig je einen Befestigungsabschnitt (11) aufweist, der an einem Stuetzrahmen eines Fitnessgeraetes angebracht ist; ein Antriebsrad (13), das drehbar mit dem Befestigungsschaft (10) verbunden ist und zur uebertragung einer Aussenenergie dient; einen Aussenrotor (20), der aus einem Schwungrad (21) und einer Mehrzahl von Permanentmagneten (22) besteht, wobei die Permanentmagneten (22) ringfoermig an dem Innenumfang des Schwungrades angeordnet sind, und wobei die Permanentmagneten (22) gleichzeitig zur Stromerzeugung und zur Erzeugung eines zum Bremsen dienenden Wirbelstroms dienen, und wobei das Schwungrad (21) drehbar mit dem Befestigungsschaft (10) verbunden ist, sodass das Schwungrad (21) auf dem Antriebsrad (13) in einer einzigen Richtung drehen kann; einen Luefter (27), der mit dem Schwungrad verbunden ist und synchron mit diesem laeuft, um eine Kuehlwirkung zu erzielen; einen Innenstator (30), der aus einem Befestigungsrahmen (32) und einem...

Machine translation: Permanent magnet eddy current brake with an integrated power generation function, which is designed for fitness equipment, comprising: a mounting shaft (10), mutually having a respective mounting portion (11) which is attached to a Stuetzrahmen a fitness machine, a drive wheel (13), which is pivotally connected to the mounting shaft (10) and for transmitting an external energy used; an outer rotor (20) which consists of a flywheel (21) and a plurality of permanent magnets (22), wherein the permanent magnets (22) circumferentially on the inner periphery the flywheel are arranged, and wherein the permanent magnet (22) simultaneously serve to generate electricity and to generate a to brake serving eddy current, and wherein the flywheel is connected (21) pivotally connected to the mounting shaft (10) so that said flywheel (21) on the drive wheel can rotate (13) in a single direction; a fan (27) which is connected to the flywheel, and in synchronism with this runs in order to obtain one Kuehlwirkung; an internal stator (30) consisting of a mounting frame (32) and one...



International class (IPC 8-9): H02K49/04 (Advanced/Invention)

CPC: H02K7/104 H02K21/22

European class: H02K7/104 T02K21/22

Family:

Publication number	Pub. date	Application number	App. date
DE202012007256 U1	20121011	DE201220007256U	20120726

Priority: DE201220007256U 20120726;

Cited documents: US7732961 BB, US6084325 A, US5711404 A,

Assignee(s): (std): CHI HUA FITNESS CO

Assignee(s): CHI HUA FITNESS CO LTD