



New connection on: : 26-09-2018 : 18:54:49 - Last disconnection on: : 26-09-2018 : 02:53:20

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

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☐ Database: EPODOC

[EPODOC: SS 1] ELECTRIC and VEHICLE

Results in EPODOC 191.622

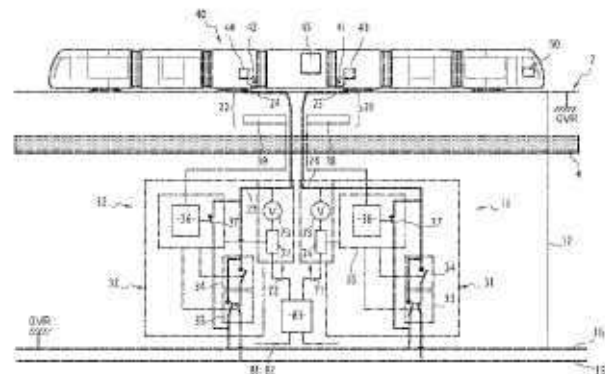
[SS 2] 1 and STATIONARY and RECHARGING

Results in EPODOC 19

[SS 3] ..li



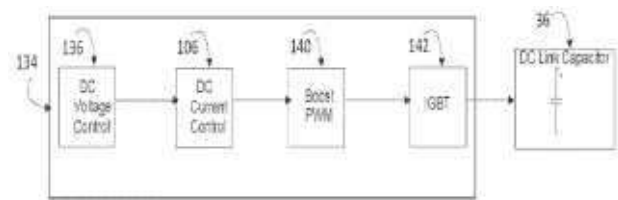
1/19 © EPODOC / EPO
PN - [US2018141452](#) A1 20180524
PR - FR20150055205
20150608; WO2016EP63057
20160608
AP - US201615579428 20160608
DT - **
CCI - [B60L5/42](#) ; [B60L11/1837](#)
CCA - [Y02T10/7005](#) ; [Y02T10/7072](#) ;
[Y02T90/121](#) ; [Y02T90/14](#) ;
[Y02T90/128](#) ; [B60L11/1816](#) ;
[B60L2250/10](#)
PA - ALSTOM TRANSP TECH [FR]
TI - ASSEMBLY CONSISTING OF
AN **ELECTRIC VEHICLE** AND A
SYSTEM FOR **STATIONARY**
CHARGING BY CONDUCTION;
ASSOCIATED SYSTEM,
FACILITY, **VEHICLE** AND METHOD



AB - An assembly made up of a **recharging** system including a power supply contact on the ground, and a switching device, to bring the power supply contact to a supply voltage delivered by a source to which the **recharging** system is connected, and a **vehicle** including a contact shoe electrically connected to onboard energy storage means, the contact shoe being placed below the **vehicle** and movable between a high position and a low position, the **vehicle** including a control device able to command the movement of the contact shoe from the high position to the low position so that it is placed in contact with the power supply contact, only when the **vehicle** is stopped in said predetermined position allowing the capture of energy from the **recharging** system, in which the footprint of the **vehicle** covers the power supply contact.

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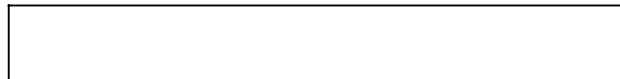
PN - [US2017361717](#) A1 20171221
 PR - US201715615647
 20170606; US201662350982P
 20160616
 AP - US201715615647 20170606
 DT - *; Rep
 CCI - [B60L11/185](#)
 CUI - [H02J3/383](#) ; [H02J7/0027](#)
 CCA - [B60L2230/22](#)
 CUA - [Y02T10/7094](#)
 PA - QIN YU [US]; DU SHANSHAN [US]
 TI - SOLAR ENERGY BASED
 MOBILE **ELECTRIC VEHICLE** FAST
 CHARGER SYSTEM
 AB - A solar energy based mobile EV
 fast charger (SE-MEVFC) system



comprising a mobile EV fast charger system installed in the service track for providing EV charging service and a **stationary** solar energy generation system located in the charging station as power source for **recharging** mobile on-board storage battery, offers EV charging services for EVs where they stranded on the road or in remote area. The SE-MEVFC system has following unique features: (1) since it has universal battery interface, it can charge any EV battery; (2) since its energy source comes from solar energy based EV charging station, it provides 100% pollution free EV charging service; (3) since it is high power battery charger system, EV battery can be fully charged in minutes rather than hours, unlike those of prior art that use gasoline based generators to generate AC power and relies on low power EV on-board charger (OBC) to charge EV battery, namely, for over 2 hours charging time getting about 10 miles driving range. Therefore, a solar energy based mobile EV fast charger (SE-MEVFC) system can ease drivers' anxiety for not being able to find charging station effectively, and at same times it makes EV operation completely pollution free and hence increases MPGe of EVs.

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PN - [GB2550480](#) A 20171122
 PNFP - GB2550480 B 20180613
 PR - GB20170005778 20170410
 AP - GB20170005778 20170410
 DT - *; Rep
 CT - || STSE (A B)
[GB2510124](#) A 20140730 [



] (JAGUAR LAND ROVER LTD [GB]);
[US2014253306](#) A1 20140911 [
] (GILLESPEY BRIAN J [US]);
[US2012133282](#) A1 20120531 [
] (RUBIO FERNANDO [US], et al);
[US2011043355](#) A1 20110224 [
] (CHANDER BALA S [US], et al);
[US2009146844](#) A1 20090611 [
] (HASSAN REZA MOHAMED [US])

CCI - [B60L11/1818](#) ; [B60L11/1861](#)

CNOI - (A B)
[B60L11/1861](#) ; [H02J7/0047](#)

CCA - [H01R2103/00](#) ; [H01R13/7175](#) ;
[H02J7/0047](#) ; [B60L2250/16](#) ;
[H01R2201/26](#)

CNOA - (A B)
[Y02T10/7005](#)

PA - (A)
 DE INNOVATION LAB LTD [GB]

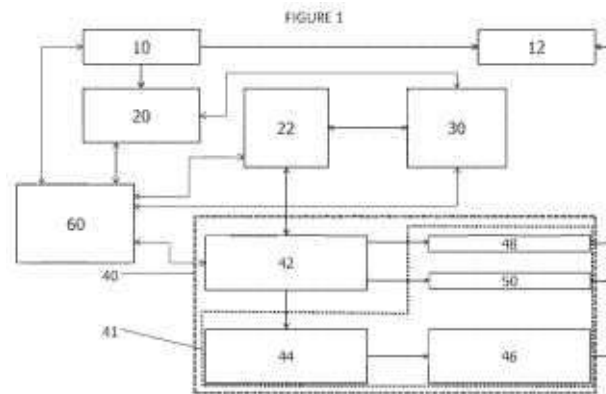
- (B)
 DETROIT ELECTRIC EV LTD [CN]

TI - (A B)
 Charging arrangements for
 electrical vehicles and methods
 of operation thereof

AB - (A)
 A charging arrangement 102 for
 an **electric vehicle** (100, Fig. 1)
 that provides a visual indication
 104, that is external to
 the **vehicle**, of a charge status of
 a battery unit during and/or
 after **recharging** of the battery
 unit. The visual indicator or
 lighting arrangement may be in
 the vicinity of charging socket
 200 and comprise of LEDs OLEDs,
 electroluminescent materials,
 polymer light-emitting
 electrochemical cells or
 incandescent sources. The visual
 indication may be a function of
 charge status. For example the
 indicator may flash at rate
 indicative of charging rate or
 change colour depending on
 whether the **vehicle** is supplying

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PN	-	<u>GB2541426</u> A 20170222
PR	-	GB20150014738 20150819
AP	-	GB20150014738 20150819
DT	-	*; Rep
CT	-	STSE (A) <u>JP2013095377</u> A 20130520 [] (DENSO CORP); <u>US2015054337</u> A1 20150226 [] (OGALE ANURADHA G [US]); <u>US2013175858</u> A1 20130711 [] (SAKURAI TAKESHI [JP], et al); <u>US2011149609</u> A1 20110623 [] (MOUSSAOUI ZAKI [US], et al); <u>US2007276556</u> A1 20071129 [] (NOEL PHILIPPE [CA], et al); <u>US2004124259</u> A1 20040701 [] (GUEZENNEC YANN [US], et al)
CCI	-	<u>B60L1/12</u> ; <u>B60L11/1868</u> ; <u>F01N3/208</u>
CNOI	-	<u>B60L1/12</u> ; <u>F01N3/208</u> ; <u>H02M3/00</u>
CCA	-	<u>Y02T10/7005</u> ; <u>Y02T10/7066</u> ; <u>F01N3/2066</u> ; <u>B60L2240/445</u> ; <u>B60L2260/54</u> ; <u>B60L2260/56</u> ; <u>B60L2260/58</u> ; <u>F01N2590/11</u> ; <u>F01N2610/02</u> ; <u>F01N2610/10</u> ; <u>F01N2610/105</u> ; <u>F01N2900/10</u> ; <u>F01N2900/104</u> ; <u>F01N2900/12</u> ; <u>Y02T10/24</u> ; <u>Y02A50/2325</u>
CNOA	-	<u>F01N2610/10</u> ; <u>F01N2610/105</u>
PA	-	FORD GLOBAL TECH LLC [US]
TI	-	Improvements in or relating to mild hybrid electric vehicles



AB

- A control system for a urea delivery system 41 within a mild-hybride **electric vehicle** (MHEV). The control system is configured to provide electrical power for the heating of the urea delivery system from the MHEV 48V battery 30. A DC-DC converter 22 may enable power from the 48V battery to be fed into a 12V electrical system 40 which provides heat directly to the urea delivery system. The control system may be operable independently of the **vehicle** engine 10, such as when the engine is switched off and the **vehicle** is **stationary**. **Recharging** of the 48V battery may commence when the **vehicle** is started. A **vehicle** usage prediction module may ensure that the 48V battery is sufficiently charged when a journey is completed to start the following journey effectively based on predictions regarding the next journey. The predictions may include journey length, commencement time, and ambient temperature there at. The heating may be provided by a heated urea tank 46 and/or heated delivery lines 48. The urea may be provided for selective catalytic reduction (SCR) in the engine exhaust system.

PN - [US2015217652](#) A1 20150806

PNFP - US9682630 B2 20170620

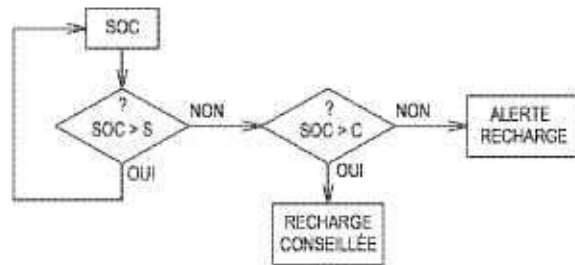
PR - FR20120055782
20120620; WO2013FR51282
20130606

AP - US201314405968 20130606

DT - **

CT - || R141 (A1)
[US2010253289](#) A1 20101007 [
] (AMIR HAIM [IL], et al);
[US2010133900](#) A1 20100603 [
] (KING ROBERT DEAN [US]);
[US2011156657](#) A1 20110630 [
] (ANDERSON RICHARD DYCHE
[US]);
[US2009055330](#) A1 20090226 [
] (MEDASANI SWARUP [US], et al);
[US2001020789](#) A1 20010913 [
] (NAKASHIMA KENJI [JP]);
[US2012016551](#) A1 20120119 [
] (KRAUSE KEVIN R [US], et al);
[US7746026](#) B2 20100629 [
] (KOZIARA CHRISTOPHER
RICHARD [US], et al);
[US8169186](#) B1 20120501 [
] (HADDAD JOSEPH C [US], et al);
[US2014347018](#) A1 20141127 [
] (BOBLETT BRENNAN [US], et al);
[US2013038284](#) A1 20130214 [
] (LAFRANCE RYAN MARC [US]);
[US2012262104](#) A1 20121018 [
] (KIRSCH DAVID M [US]);
[US9067503](#) B2 20150630 [
] (TURNER DEXTER [US])

- || STSE (B2)
[US7746026](#) B2 20100629 [
] (KOZIARA CHRISTOPHER
RICHARD [US], et al);
[US8169186](#) B1 20120501 [
] (HADDAD JOSEPH C [US], et al);
[US9067503](#) B2 20150630 [
] (TURNER DEXTER [US]);
[US2001020789](#) A1 20010913 [
] (NAKASHIMA KENJI [JP]);
[US2009055330](#) A1 20090226 [
] (MEDASANI SWARUP [US], et al);
[US2010133900](#) A1 20100603 [
] (KING ROBERT DEAN [US]);



[US2010253289](#) A1 20101007 [] (AMIR HAIM [IL], et al);
[US2011156657](#) A1 20110630 [] (ANDERSON RICHARD DYCHE [US]);
[US2012016551](#) A1 20120119 [] (KRAUSE KEVIN R [US], et al);
[US2012262104](#) A1 20121018 [] (KIRSCH DAVID M [US]);
[US2013038284](#) A1 20130214 [] (LAFRANCE RYAN MARC [US]);
[US2014347018](#) A1 20141127 [] (BOBLETT BRENNAN [US], et al)

CCI - [B60W50/14](#) ; [B60L11/14](#) ;
[B60L11/1862](#) ; [B60W10/06](#) ;
[B60W10/08](#) ; [B60W10/26](#) ;
[B60W20/00](#) ; [B60W30/18054](#) ;
[B60W20/13](#)

CUI - [B60L11/1809](#)

CCA - [Y02T10/7077](#) ; [Y02T10/7044](#) ;
[Y02T10/7005](#) ; [Y02T10/705](#) ;
[Y02T10/70](#) ; [B60L2240/12](#) ;
[B60L2250/10](#) ; [B60L2250/12](#) ;
[B60L2250/24](#) ; [B60L2260/22](#) ;
[B60W2510/244](#) ;
[B60W2710/244](#)

CUA - [B60L11/123](#) ; [B60L11/1838](#) ;
[Y02T90/167](#)

PA - (A1)
 RENAULT SA [FR]
 - (B2)
 RENAULT SAS [FR]

TI - (A1)
 METHOD FOR **RECHARGING** A
 BATTERY OF A HYBRID **VEHICLE**
 WHEN THE **VEHICLE**
 IS **STATIONARY**
 - (B2)
 Method for **recharging** a battery
 of a hybrid **vehicle** when
 the **vehicle** is **stationary**

AB - (A1 B2)
 A method for
 controlling **recharging** of a
 battery of a hybrid **vehicle** when
 the **vehicle** is **stationary**,
 the **vehicle** including a heat

engine and at least one **electric** machine that can simultaneously or independently generate movement of the **vehicle** in **electric**, thermal, and hybrid operating modes, according to rolling conditions and a state of charge of a traction battery providing a power supply of the **electric** machine.

The **recharging** of the battery is activated when the **vehicle** is **stationary**, at request of a driver acting on a dedicated interface.

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PN - [CN104395170](#) A 20150304

PR - WO2013FR51282
20130606; FR20120055782
20120620

AP - CN2013832140 20130606

DT - I

CCI - [B60W50/14](#) ; [B60L11/14](#) ;
[B60L11/1862](#) ; [B60W10/06](#) ;
[B60W10/08](#) ; [B60W10/26](#) ;
[B60W20/00](#) ; [B60W30/18054](#) ;
[B60W20/13](#)

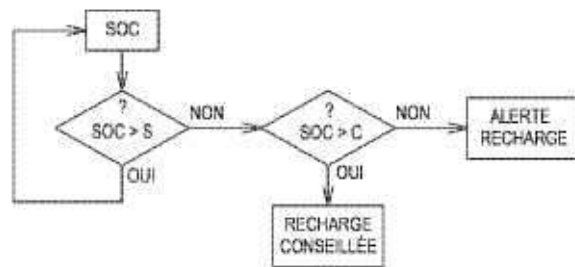
CUI - [B60L11/1809](#)

CNOI - [B60W50/14](#) ; [B60L11/14](#) ;
[B60L11/1862](#) ; [B60W10/06](#) ;
[B60W10/26](#) ; [B60W20/00](#) ;
[B60W30/18054](#)

CCA - [Y02T10/7077](#) ; [Y02T10/7044](#) ;
[Y02T10/7005](#) ; [Y02T10/705](#) ;
[Y02T10/70](#) ; [B60L2240/12](#) ;
[B60L2250/10](#) ; [B60L2250/12](#) ;
[B60L2250/24](#) ; [B60L2260/22](#) ;
[B60W2510/244](#) ;
[B60W2710/244](#)

CUA - [B60L11/123](#) ; [B60L11/1838](#) ;
[Y02T90/167](#)

CNOA - [B60L2240/12](#) ; [B60L2250/10](#) ;
[B60L2250/12](#) ; [B60L2250/24](#) ;
[B60L2260/22](#) ; [B60W2510/244](#) ;
[B60W2710/244](#)



PA - RENAULT SA

TI - Method for **recharging** a battery of a hybrid **vehicle** when the **vehicle** is **stationary**

AB - The invention relates to a method for controlling the **recharging** of a battery of a hybrid **vehicle** when the **vehicle** is **stationary**, said **vehicle** comprising a heat engine and at least one **electric** machine that can simultaneously or independently generate the movement of the **vehicle** in **electric**, thermal and hybrid operating modes, according to the rolling conditions and the state of charge (SOC) of a traction battery providing the power supply of the **electric** machine, characterised in that the **recharging** of the battery is activated when the **vehicle** is **stationary**, at the request of the driver acting on a dedicated interface.

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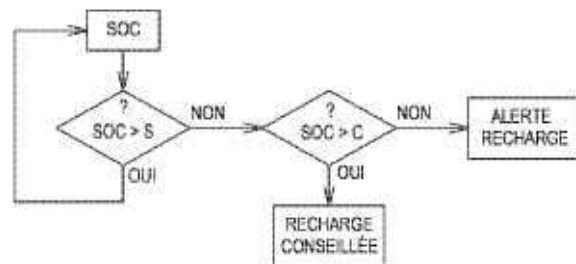
PN - [WO2013190205](#) A1 20131227

PR - FR20120055782 20120620

AP - WO2013FR51282 20130606

DT - **

CT - |EP| ISR (A1)
[US2011140660](#) A1 20110616
 [XAYI] (POTTER MICHAEL [IT])
 [X] 1,5,8,9
 * paragraphs [0006] - [0008] - [0017] *
 [A] 3,4
 [Y] 2,6,7
 [I] 10;
[US2009108803](#) A1 20090430
 [Y] (SINGARAJAN KUMAR [US], et al)
 [Y] 2
 * paragraphs [0010] , [0029] *;
[EP2426002](#) A1 20120307



[Y] (JOHNSON CONTROLS TECH
CO [US])
[Y] 6,7
* paragraphs [0019] , [0020] *;
[EP2423027](#) A2 20120229
[XI] (MITSUBISHI MOTORS CORP
[JP])
[X] 1,5,8
* paragraphs [0007] , [0022] ,
[0023] , [0030] , [0039] *
[I] 9,10;
[DE102010044089](#) A1 20120524
[XI] (BOSCH GMBH ROBERT [DE])
[X] 1,5
* paragraphs [0006] , [0009] ,
[0010] , [0035] *
[I] 9,10;
[US2012016551](#) A1 20120119
[A] (KRAUSE KEVIN R [US], et al)
[A] 1-10
* paragraph [0006] *

CCI - [B60W50/14](#) ; [B60L11/14](#) ;
[B60L11/1862](#) ; [B60W10/06](#) ;
[B60W10/08](#) ; [B60W10/26](#) ;
[B60W20/00](#) ; [B60W30/18054](#) ;
[B60W20/13](#)

CUI - [B60L11/1809](#)

CCA - [Y02T10/7077](#) ; [Y02T10/7044](#) ;
[Y02T10/7005](#) ; [Y02T10/705](#) ;
[Y02T10/70](#) ; [B60L2240/12](#) ;
[B60L2250/10](#) ; [B60L2250/12](#) ;
[B60L2250/24](#) ; [B60L2260/22](#) ;
[B60W2510/244](#) ;
[B60W2710/244](#)

CUA - [B60L11/123](#) ; [B60L11/1838](#) ;
[Y02T90/167](#)

PA - RENAULT SA [FR]

TI - METHOD FOR **RECHARGING** A
BATTERY OF A HYBRID **VEHICLE**
WHEN THE **VEHICLE**
IS **STATIONARY**

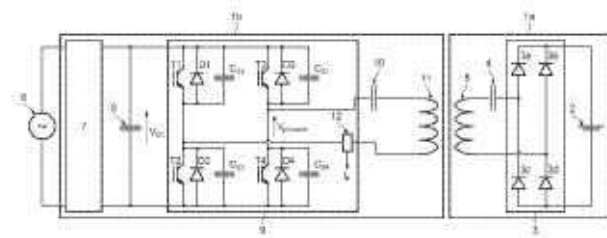
AB - The invention relates to a
method for controlling
the **recharging** of a battery of a
hybrid **vehicle** when the **vehicle**
is **stationary**, said **vehicle**
comprising a heat engine and at

least one **electric** machine that can simultaneously or independently generate the movement of the **vehicle** in **electric**, thermal and hybrid operating modes, according to the rolling conditions and the state of charge (SOC) of a traction battery providing the power supply of the **electric** machine, characterised in that the **recharging** of the battery is activated when the **vehicle** is **stationary**, at the request of the driver acting on a dedicated interface.

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- PN - [WO2013136004](#) A2 20130919
- PNFP - WO2013136004 A3 20141113
- PR - FR20120052283 20120314
- AP - WO2013FR50511 20130312
- DT - *; Rep
- CT - [EP] ISR (A3)
[XP032019341](#) A[A];
[XP011139887](#) A[A];
[EP0715389](#) A1 19960605
[AD] (HUGHES AIRCRAFT CO [US])
[AD] 1-7
* figure 1 *;
[FR2947113](#) A1 20101224
[AD] (RENAULT SAS [FR])
[AD] 1-7
* figure 6 *;
[US5654621](#) A 19970805
[AD] (SEELIG ANTON [DE])
[AD] 1-7
* figures 1,3 *;
[EP2209180](#) A1 20100721
[A] (SEMIKRON ELEKTRONIK GMBH [DE])
[A] 1-7
* paragraphs [0001] , [0004] , [0005] , [0009] , [0012]; figure 7 *;
[US2002054498](#) A1 20020509
[A] (CHO HISANORI [JP], et al)
[A] 1-7
* figure 1 *;

FIG.1



[EP2317624](#) A1 20110504
 [AD] (TDK CORP [JP])
 [AD] 1-7
 * figure 1 *;
[US2011193416](#) A1 20110811
 [AD] (CAMPANELLA ANDREW J
 [US], et al)
 [AD] 1-7
 * figure 8 *;
[JP2012210116](#) A 20121025
 [IP] (EQUOS RES CO LTD)
 [IP] 1,5
 * the whole document *

CTNP - [EP] ISR (A3)
 [A] - RAFAL M MISKIEWICZ ET
 AL, "Contactless battery charger
 with bi-directional energy
 transfer for plug-in vehicles with
 vehicle-to-grid capability",
 INDUSTRIAL ELECTRONICS (ISIE),
 2011 IEEE INTERNATIONAL
 SYMPOSIUM ON, IEEE,
 (20110627), doi: [10.1109/ISIE.
 2011.5984460](#), ISBN 978-1-4244-
 9310-4, pages 1969 - 1973,
 XP032019341
 [A] 1-7
 * Partie II;; figures 1,2 *
 [A] - COVIC G A ET AL, "Design
 Considerations for a Contactless
 Electric Vehicle Battery Charger",
 IEEE TRANSACTIONS ON
 INDUSTRIAL ELECTRONICS, IEEE
 SERVICE CENTER, PISCATAWAY, NJ,
 USA, (20051001), vol. 52, no. 5,
 doi:[10.1109/TIE.2005.855672](#),
 ISSN 0278-0046, pages 1308 -
 1314, XP011139887
 [A] 1-7
 * Partie B;; figure 2 *

CCI - [B60L11/182](#) ; [B60L11/1833](#) ;
[H02J5/005](#) ; [H02J7/025](#)

CUI - [H02J50/12](#)

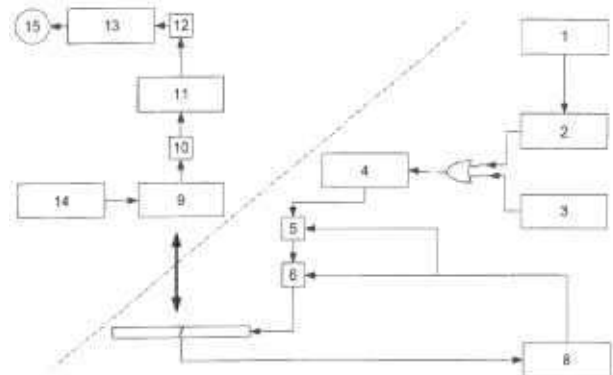
CCA - [Y02T10/7005](#) ; [Y02T10/7241](#) ;
[Y02T90/125](#) ; [Y02T90/12](#) ;
[Y02T10/7072](#) ; [Y02T90/121](#) ;
[Y02T90/14](#) ; [Y02T90/127](#) ;
[Y02T90/122](#) ; [H02M3/33515](#) ;

[B60L2210/30](#) ; [B60L2210/40](#) ;
[H02M2001/0012](#)

- PA - (A2 A3)
RENAULT SA [FR]
- TI - (A2 A3)
DEVICE FOR
CONTACTLESSLY **RECHARGING** A
MOTOR **VEHICLE** BATTERY, AND
ASSOCIATED CONTROL METHOD
- AB - (A2 A3)
The invention relates to a device
for contactlessly **recharging** a
motor **vehicle** battery, including
a contactless **recharging** system
and a control system,
the **recharging** system including
a **stationary** portion (1a), which
is to be connected to the ground,
which is provided with an
inverter, and which is to be
connected to an **electric** power
supply (6), and a movable
portion (1b) which is to be
connected to the **vehicle** and to
the battery (2). The **recharging**
device includes a control system
provided with a means for
determining a conduction time
on the basis of electrical
variables of the inverter, and a
means for controlling the
inverter on the basis of the
conduction time.

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- PN - [US2009272587](#) A1 20091105
- PNFP - US7984774 B2 20110726
- PR - IT2006TO00610
20060817; WO2007IT00554
20070801
- AP - US20070376286 20070801
- DT - **
- CT - || STSE (B2)
[US4158802](#) A 19790619 [
] (ROSE II WILLIAM R)
[US5573090](#) A 19961112 [
] (ROSS HOWARD R [US])



	US5821728 A 19981013 [] (SCHWIND JOHN P [US]) US6557476 B1 00000000 [] US7248017 B1 00000000 [] US7451839 B1 00000000 []
	- R141 (A1) US6557476 B2 []; US4158802 A []; US7248017 B2 []; US5821728 A []; US5573090 A []; US7451839 B2 []; USRE29994E E []
CCI	- B60L5/42 ; B60L8/003 ; B60L11/1818 ; B60M7/003
CCA	- Y02T10/7005 ; Y02T10/7094 ; Y02T10/7072 ; Y02T10/7083 ; Y02T90/14 ; B60L2200/26
PA	- (A1 B2) SEQUOIA AUTOMATION S R L [IT]
TI	- (A1 B2) QUICK-RECHARGINGENERGY FEEDING SYSTEM FOR MEANS OF TRANSPORT WITH ELECTRIC TRACTION
AB	- (A1 B2) A quick-recharging energy feeding system is described, for a transport vehicle with electric traction, performed in every foreseen stop of the vehicle by means of a connection that can be directly and automatically performed next to such stop, through a road bed, comprising at least one recharging subsystem arranged on the vehicle and at least one stationary system cooperating with the recharging subsystem for transmitting electric energy.

PN - [CA2660509](#) A1 20080221

PNFP - CA2660509 C 20140506

PR - IT2006TO00610
20060817; WO2007IT00554
20070801

AP - CA20072660509 20070801

DT - I

CCI - [B60L5/42](#) ; [B60L8/003](#) ;
[B60L11/1818](#) ; [B60M7/003](#)

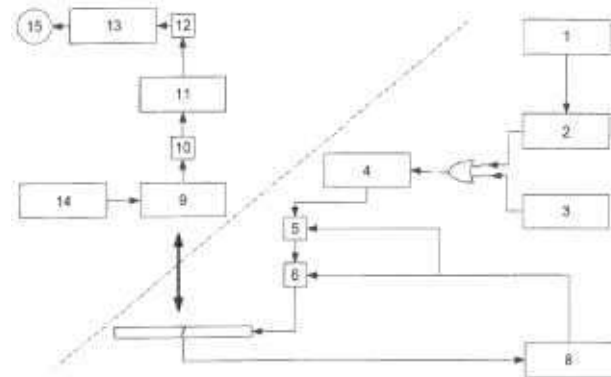
CCA - [Y02T10/7005](#) ; [Y02T10/7094](#) ;
[Y02T10/7072](#) ; [Y02T10/7083](#) ;
[Y02T90/14](#) ; [B60L2200/26](#)

PA - (A1 C)
SEQUOIA AUTOMATION S R L [IT]

TI - (A1 C)
QUICK-**RECHARGING** ENERGY
FEEDING SYSTEM FOR MEANS OF
TRANSPORT WITH **ELECTRIC**
TRACTION

AB - (A1)
A quick-**recharging** energy
feeding system is described, for
a transport vehicle with **electric**
traction, performed in every
foreseen stop of the vehicle by
means of a connection that can
be directly and automatically
performed next to such stop,
through a road bed, comprising
at least one **recharging** sub-
system arranged on the **vehicle**
and at least one **stationary**
system cooperating with
the **recharging** subsystem for
transmitting **electric** energy.

- (C)
A quick-**recharging** energy
feeding system is described, for
a transport **vehicle** with **electric**
traction, performed in every
foreseen stop of the **vehicle** by
means of a connection that can
be directly and automatically
performed next to such stop,
through a road bed, comprising
at least one **recharging**
subsystem arranged on



the **vehicle** and at least
 one **stationary** system
 cooperating with the **recharging**
 subsystem for
 transmitting **electric** energy.

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PN - [WO2006113744](#) A2 20061026

PNFP - WO2006113744 A3 20070628

PR - US20050110094 20050419

AP - WO2006US14611 20060418

DT - **

CT - [US] ISR (A3)
[US5315227](#) A 19940524
 [A] (PIERSON MARK V [US], et al)

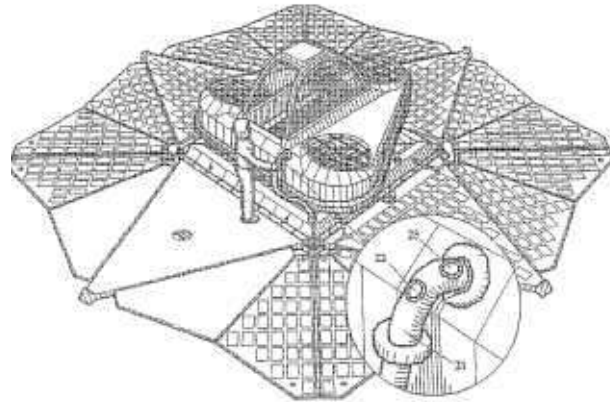
CCI - [B60S5/02](#) ; [B60L8/00](#) ;
[B60L8/003](#) ; [B60L11/1816](#) ;
[B60L11/1824](#) ; [B60L11/1842](#) ;
[B62D31/003](#) ; [E04H5/02](#) ;
[H02S30/20](#) ; [H02S40/38](#)

CCA - [Y02T10/7094](#) ; [Y02T90/163](#) ;
[Y02T10/7083](#) ; [Y02T90/121](#) ;
[Y02T90/14](#) ; [Y02T90/128](#) ;
[Y02T90/32](#) ; [Y04S10/126](#) ;
[Y02E60/721](#) ; [H02J7/355](#) ;
[B60L2200/26](#) ; [B60L2230/22](#) ;
[H01M2250/20](#)

PA - (A2 A3)
 UFOZ LLC [US]

TI - (A2 A3)
 PERSONAIRENEWABLE-ENERGY
 FUELING & STORAGE STATION
 FOR **ELECTRIC**-POWERED VEHICLES

AB - (A2 A3)
 A personal refueling station for a
 personal-sized **electric vehicle**
 has a polygonal base structure
 (5) with a plurality of flat panels
 (1,2) hinged thereto which open
 to form a flat surface and close
 up to form an upright pyramid
 housing for storage. The flat
 panels have solar PV arrays (12)
 mounted on their inside surfaces
 which can generate electricity
 from sunlight in the open



position. The electricity is used to generate hydrogen for hydrogen-fuel-cell vehicles, or is stored for **recharging** non-hydrogen **electric** vehicles. Alternatively, hydrogen or electricity may be provided from an external renewable power source. The station can also have utility hookups (4) to provide excess hydrogen or electricity to an external energy usage, such as a home, business, or other station. The personal refueling station has a compact design that can be installed at home or business locations. It is designed to accommodate a personal-use **electric vehicle** such as an **electric** car or cart or a personal VTOL hovercraft. It can be used in a **stationary** location or transported for remote use, as well as operated by remote control.

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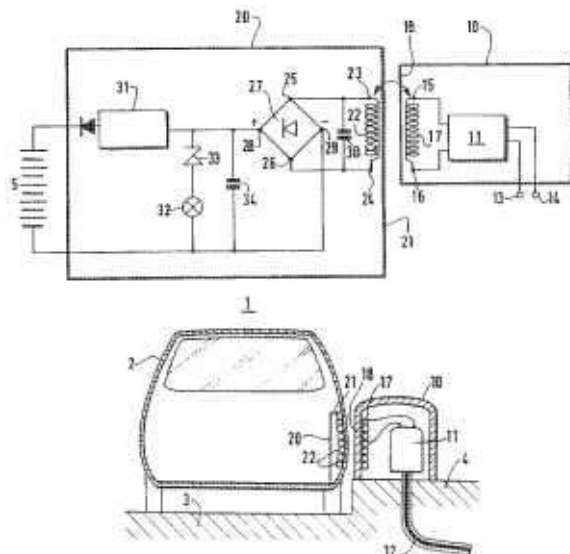
PN - [US5710502](#) A 19980120

PR - US19960660518
19960607; FR19920010673
19920902; US19940252589
19940601

AP - US19960660518 19960607

DT - **

CT - || STSE (A)
[US3938018](#) A 19760210 [] (DAHLERNEST A);
[US4347472](#) A 19820831 [] (LEMELSON JEROME H);
[US4379988](#) A 19830412 [] (MATTATALL PATRICIO [US]);
[US4761628](#) A 19880802 [] (NISHI HIDEJI [JP], et al);
[US4800328](#) A 19890124 [] (BOLGER JOHN G [US], et al);
[US5034717](#) A 19910723 [] (SHINKAI HIROMU [JP]);
[US5122729](#) A 19920616 []

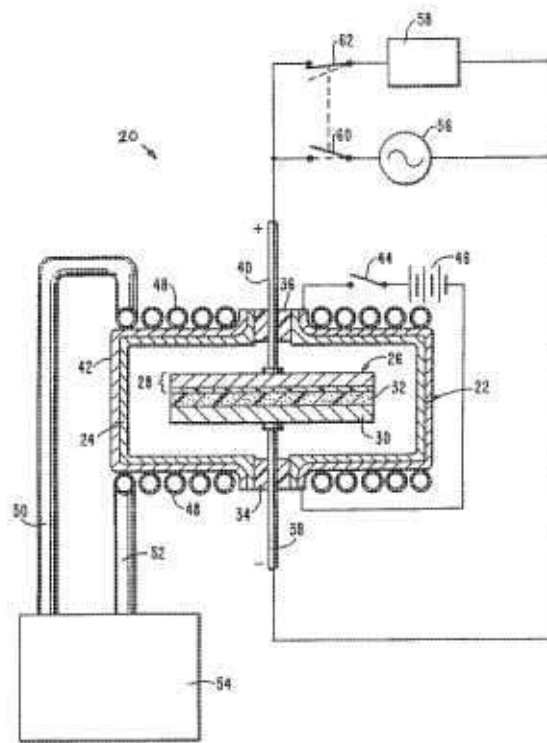


	] (ITOGA TOSHIYUKI [JP], et al); US5157319 A 19921020 [] (KLONTZ KEITH W [US], et al); US5207304 A 19930504 [] (LECHNER EDWARD H [US], et al); US5311973 A 19940517 [] (TSENG LING-YUAN [US], et al); US5341083 A 19940823 [] (KLONTZ KEITH W [US], et al); US5434493 A 19950718 [] (WOODY GEORGE R [US], et al); DE2434890 A 00000000 []; DE3131105 A1 19830224 [] (BRAUN AG [DE]); DE385502 C 19231207 [] (RUDOLF ALTENPOHL); WO8404212 A1 19841025 [] (TOWMOTOR CORP [US])
CCI	- B60L11/182 ; B60L11/1824 ; B60L11/1831 ; H02J5/00 ; H02J5/005 ; H02J7/025
CUI	- H02J50/12
CCA	- Y02T10/7088 ; Y02T10/7005 ; Y02T10/7241 ; Y02T90/125 ; Y02T90/121 ; Y02T90/14 ; Y02T90/127 ; Y02T90/122 ; B60L2210/30 ; B60L2230/14
PA	- CABLECO AND POUMEY [FR]
TI	- System for recharging the storage batteries of an electric motor vehicle
AB	- A system for recharging storage batteries in an electric motor vehicle includes a stationary unit and a vehicle mounted unit. The stationary unit is provided with a first dielectric case and a high-frequency generator connected to the electric supply mains and to at least one inductor positioned proximate a front wall of the first dielectric case. The vehicle mounted unit includes a second dielectric case positionable adjacent the front wall of the first dielectric case. The second dielectric case is provided with

at least one sensor connected to a rectifier which is connected, in turn, to the storage batteries of the **vehicle**. The at least one sensor is positioned proximate an exterior wall of the second case while both the at least one inductor and sensor are formed from respective flat coils capable of being magnetically coupled through air when positioned adjacent each other.

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- PN - [US5395708](#) A 19950307
- PR - US19940181986 19940114
- AP - US19940181986 19940114
- DT - *; Rep
- CT - || STSE (A)
- [US3928792](#) A 19751223 [] (MULLERSMAN FERDINAND HENRY, et al)
- [US4098962](#) A 19780704 [] (DENNISON EDWARD S)
- [US4229687](#) A 19801021 [] (NEWMAN WILLIAM A)
- [US4324845](#) A 19820413 [] (STOCKEL JOSEPH F)
- [US4680241](#) A 19870714 [] (DYER CHRISTOPHER K [US])
- [US4865929](#) A 19890912 [] (ECK GISMAR [DE])
- [US5015545](#) A 19910514 [] (BROOKS ALEC N [US])
- [US5071652](#) A 19911210 [] (JONES KENNETH R [US], et al)
- [US5141826](#) A 19920825 [] (BOEHM HARALD [DE], et al)
- [US5204609](#) A 19930420 [] (ALISAUSKI DARYL J [US])
- [US5215834](#) A 19930601 [] (REHER MICHAEL T [US], et al)
- [US5229702](#) A 19930720 [] (BOEHLING DANIEL E [US], et al)
- CCI - [B60L3/0046](#) ; [B60L11/1824](#) ; [B60L11/1874](#) ; [H01M10/44](#) ; [H01M10/625](#) ; [H01M10/6563](#) ; [H01M10/6568](#) ; [H01M10/66](#) ;



	<u>H01M10/613</u>
CCA	- <u>Y02E60/124</u> ; <u>Y02T10/7005</u> ; <u>Y02T10/705</u> ; <u>Y02T90/12</u> ; <u>Y02T10/7072</u> ; <u>Y02T90/121</u> ; <u>Y02T90/14</u> ; <u>H01M10/34</u> ; <u>H01M10/345</u>
PA	- LORAL SPACE SYSTEMS INC [US]
TI	- Bimodal electric vehicle battery system
AB	- The capacity of a nickel hydroxide based battery is increased when recharge is carried out at a much lower temperature than its discharge. In the instance of a vehicle including a load powered by a nickel oxide-hydrogen battery, a generator is provided for recharging the battery. A switch is selectively movable between a first position electrically coupling the battery to the load for operating the load and a second position electrically coupling the battery to the generator for recharging . Temperature control apparatus maintains the temperature of the battery at a first temperature in the range of approximately 10 DEG C. to 50 DEG C. when the battery is electrically coupled to the load and is operable for maintaining the battery at a second temperature substantially lower than the first temperature and in the range of approximately 10 DEG C. to -30 DEG C. when the battery is electrically coupled to the generator. When the battery is used to propel the vehicle , the temperature control apparatus may include a stationary heat exchanger external to the vehicle to which the battery can be coupled for cooling and an external source of EMF may also

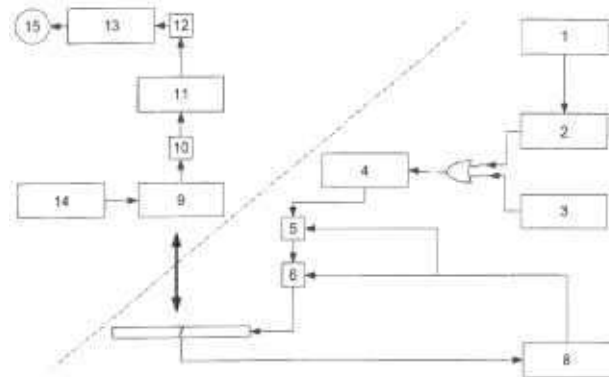
be provided to which the battery
can be coupled for **recharging**.

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- PN - [US2005231157](#) A1 20051020
- PNFP - US7248018 B2 20070724
- PR - US20050110094 20050419; US20040564137P 20040420
- AP - US20050110094 20050419
- DT - *; Rep
- CT - || R141 (A1)
[US5315227](#) A 19940524 [] (PIERSON MARK V [US], et al)
- || STSE (B2)
[US5315227](#) A 19940524 [] (PIERSON MARK V [US], et al)
- CCI - [B60S5/02](#) ; [B60L8/00](#) ; [B60L8/003](#) ; [B60L11/1816](#) ; [B60L11/1824](#) ; [B60L11/1842](#) ;
[B62D31/003](#) ; [E04H5/02](#) ; [H02S30/20](#) ; [H02S40/38](#)
- CCA - [Y02T10/7094](#) ; [Y02T90/163](#) ; [Y02T10/7083](#) ; [Y02T90/121](#) ; [Y02T90/14](#) ; [Y02T90/128](#) ;
[Y02T90/32](#) ; [Y04S10/126](#) ; [Y02E60/721](#) ; [H02J7/355](#) ; [B60L2200/26](#) ; [B60L2230/22](#) ;
[H01M2250/20](#)
- PA - (B2)
UFOZ LLC [US]
- TI - (A1)
Personal renewable-energy fueling & storage station for **electric**-powered vehicles
- (B2)
Personal renewable-energy fueling and storage station for **electric**-powered vehicles
- AB - (A1 B2)
A personal refueling station for a personal-sized **electric vehicle** has a polygonal base structure housing a refueling system and a plurality of flat panels hinged thereto which open to form a flat surface and close up to an upright pyramid for storage. The flat panels have solar PV arrays mounted on their inside surfaces which generate electricity from sunlight in the open position. The electricity is used to generate hydrogen for hydrogen-fuel-cell vehicles, or is stored for **recharging** non-hydrogen **electric** vehicles. Alternatively, hydrogen or electricity may be provided from an external renewable power source. The station can also have utility hookups to provide excess hydrogen or electricity to an external energy usage, such as a home, business, or other station. The personal refueling station has a compact design that can be installed at home or business locations. It is designed to accommodate a personal-use **electric vehicle** such as an **electric** car or cart or a personal VTOL hovercraft. It can be used in a **stationary** location or transported for remote use, as well as operated by remote control.

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PN - [WO2008020463](#) A2 20080221
 PNFP - WO2008020463 A3 20080417
 PR - IT2006TO00610 20060817
 AP - WO2007IT00554 20070801
 DT - *; Rep
 CT - |EP| ISR (A3)
 [GB2185866](#) A 19870729
 [XY] (CITY WHEELS LTD)
 [X] 1
 * page 1, line 22 - page 1,
 line 48; figures 1,4,5,10,14,16a *
 [Y] 2;
 [EP1228919](#) A2 20020807
 [XY] (ALSTOM [FR])
 [X] 1
 * the whole document *
 [Y] 2;
 [USRE29994E](#) E 19790515
 [X] (BOSSI)
 [X] 1
 * the whole document *;
 [JPH0928922](#) A 19970204
 [A] (TAITO CORP)
 [A] 1,2,4
 * abstract *;
 [FR2271952](#) A1 19751219
 [A] (MARY DOMINIQUE [FR])
 [A] 1-3
 * the whole document *;
 [FR2794695](#) A1 20001215
 [X] (MENIERE FREDERIC [FR])
 [X] 1
 * the whole document *
 CCI - [B60L5/42](#) ; [B60L8/003](#) ;
 [B60L11/1818](#) ; [B60M7/003](#)
 CCA - [Y02T10/7005](#) ; [Y02T10/7094](#) ;
 [Y02T10/7072](#) ; [Y02T10/7083](#) ;
 [Y02T90/14](#) ; [B60L2200/26](#)
 PA - (A2 A3)
 SEQUOIA AUTOMATION S R L [IT];
 IPPOLITO MASSIMO [IT]
 TI - (A2 A3)
 QUICK-RECHARGINGENERGY
 FEEDING SYSTEM FOR MEANS OF
 TRANSPORT WITH **ELECTRIC**
 TRACTION
 AB - (A2 A3)



A quick-**recharging** energy feeding system is described, for a transport **vehicle** with **electric** traction, performed in every foreseen stop of the **vehicle** by means of a connection that can be directly and automatically performed next to such stop, through a road bed, comprising at least one **recharging** subsystem arranged on the **vehicle** and at least one **stationary** system cooperating with the **recharging** subsystem for transmitting **electric** energy.

16/19 © EPODOC / EPO

PN - [GB1440484](#) A 19760623

PR - DE19722258707 19721130

AP - GB19730055363 19731129

DT - **

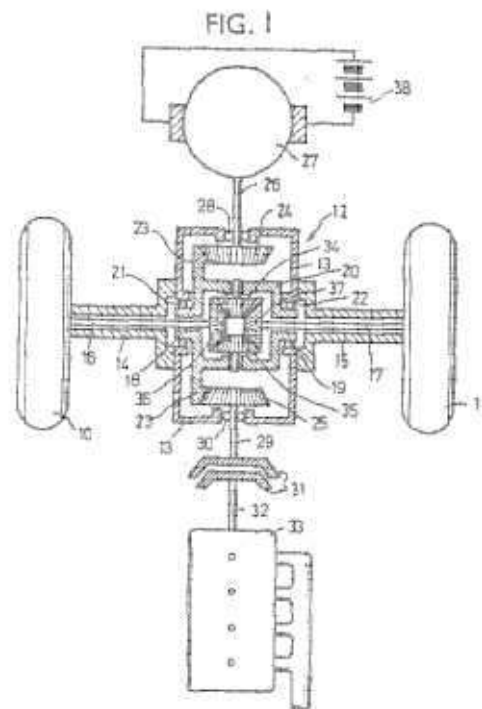
CCI - [B60K6/48](#) ; [B60L11/00](#)

CCA - [Y02T10/6221](#) ; [Y02T10/626](#) ; [B60K2006/4808](#)

PA - BOSCH GMBH ROBERT

TI - MOTOR **VEHICLE** DRIVES

AB - 1440484 Motor **vehicle** hybrid drive ROBERT BOSCH GmbH 29 Nov 1973 [30 Nov 1972] 55363/73 Heading B7H A motor **vehicle** having a hybrid drive comprises an internal combustion engine 33, a dynamo-**electric** machine 27, and a rechargeable battery 38. The dynamo-**electric** machine 27 may operate as a generator to charge the battery 38 or as a motor to supplement or replace the drive from the engine 33. The rotor-shaft 26 of the dynamo-**electric** machine 27 as well as the crank-shaft 32 of the internal combustion engine 33 are both coupled mechanically to a differential gear 12 arranged to



drive two halfshafts 16, 17 connected with the drive wheels 10, 11. A clutch 31 is provided between the crank-shaft 32 of the internal combustion engine 33 and the differential gear 12. An additional clutch (39) Fig. 2 (not shown) may be provided between the differential gear 12 and the wheel 11 to permit **recharging** of the battery when the **vehicle** is **stationary**.

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PN - [DE4107391](#) A1 19920910

PR - DE19914107391 19910308

AP - DE19914107391 19910308

DT - *; Rep

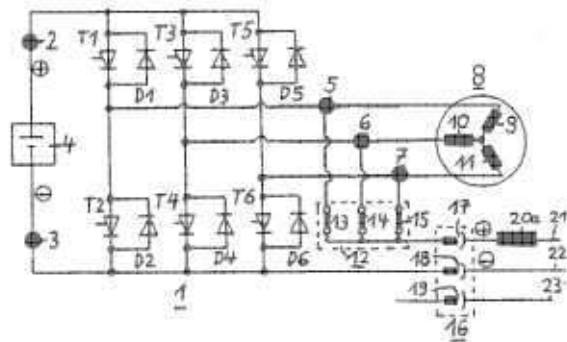
CCI - [B60L11/1803](#) ; [B60L11/1811](#) ;
[B60L11/1812](#) ; [B60L11/1814](#) ;
[B60L11/1816](#) ; [B60L15/007](#) ;
[H02J7/022](#) ; [H02M7/797](#)

CCA - [Y02T10/7005](#) ; [Y02T10/7241](#) ;
[Y02T10/92](#) ; [Y02T10/7072](#) ;
[Y02T10/645](#) ; [Y02T10/641](#) ;
[Y02T90/14](#) ; [Y02T90/127](#) ;
[B60L2210/40](#) ; [B60L2220/54](#)

PA - ABB PATENT GMBH [DE]

TI - **Electric** road **vehicle** with rechargeable battery - has DC=AC converter acting as DC regulator during battery **recharging**

AB - The **electric** road **vehicle** has at least one 3-phase motor supplied from a rechargeable battery (4) via a DC/AC converter (1) which also acts as a DC regulator when the battery (4) is recharged from a **stationary** DC network (21,22). The d.c. regulator uses the inductances provided by the motor windings (9,10,11) and at least one separate inductance (20b) within the **vehicle**, or an inductance within the **stationary** charging station. ADVANTAGE - Reduces



overall weight of **electric**
road **vehicle**.

18/19 © EPODOC / EPO

- PN - [DE3343539](#) A1 19840426
- PR - DE19833343539 19831201
- AP - DE19833343539 19831201
- DT - *; Rep
- CT - || STSE (A1)
[DE940241](#) C 19560315 [] (KEHLBREIER ERNST);
[DE2643141](#) B2 19780928 [];
[DE2333979](#) B2 19750522 [];
[DE1490884](#) B2 19700226 [];
[DE2659030](#) A1 19771124 [] (PUCKETT WILLIAM EVERETT);
[DE2520738](#) A1 19751120 [] (FORECOURT AUTOMATION);
[DE2419664](#) A1 19741031 [] (TREHN KARL BENGT I SON);
[DE2358194](#) A1 19750605 [] (SCHAEFER MANFRED);
[DE1474950](#) A1 19690821 [] (WEIDNER HEINZ);
[DE1474790](#) A1 19691106 [] (PETER JENSEN FA);
[DE7328070U](#) U 19731122 [];
[DE1970240U](#) U 19671012 [] (MUENS OTTO [DE]);
[DE1876066U](#) U 19630725 [] (VOIGTLAENDER AG [DE]);
[DE1841688U](#) U 19611116 [] (DB BUNDESBahn ZENTRALAMT [DE]);
[US4154324](#) A 19790515 [] (NICHOLAS WILLIAM, et al);
[EP0092436](#) A2 19831026 [] (NORTHERN IRELAND ELECTRICITY [GB])
- CCI - [B60L11/1824](#) ; [B60L11/1825](#) ; [G01R21/00](#) ; [G07F15/003](#) ; [H02G11/02](#)
- CCA - [Y02T10/7088](#) ; [Y02T10/7005](#) ; [Y02T90/163](#) ; [Y02T90/121](#) ; [Y02T90/14](#) ; [Y02T90/128](#) ;
[B60L2230/16](#)
- PA - STRAASS HARALD
- TI - Device for the power supply of vehicles
- AB - In order to supply electrical energy to electrically driven vehicles, explosive-gas-powered vehicles etc., during a **stationary** period or pause in operation for **recharging** their energy store, the connection between the **vehicle** and the supply device is produced by means of a cable and a power connecting element (for example a plug) mounted thereon. The cable is accommodated on a cable roller and is kept slightly tensioned by an **electric** motor when it is being unwound and wound up. During the charging process, the **electric** motor is switched off and the cable roller is fixed. The power connecting element can be blocked on the **vehicle** against unauthorised unwinding. This arrangement can be combined with various payment systems; a coin slot with an input keyboard is preferably used.

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PN - [CA2136555](#) A1 19950715

PR - US19940181986 19940114

AP - CA19942136555 19941124

DT - I

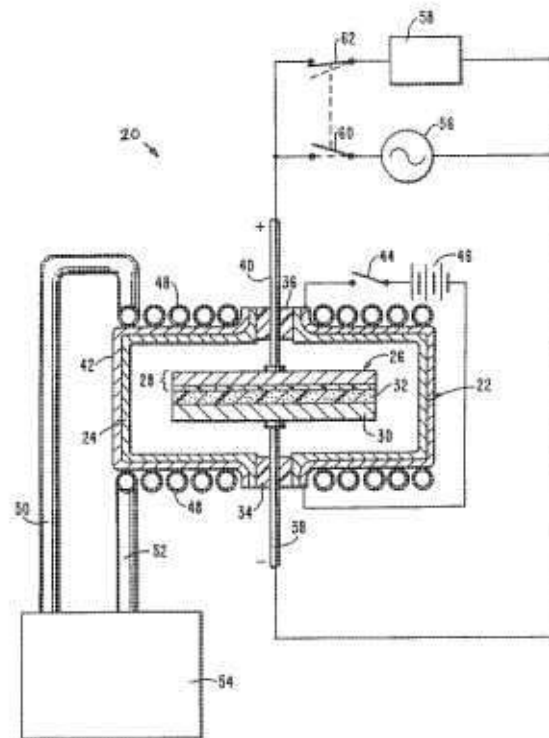
CCI - [B60L3/0046](#) ; [B60L11/1824](#) ;
[B60L11/1874](#) ; [H01M10/44](#) ;
[H01M10/625](#) ; [H01M10/6563](#) ;
[H01M10/6568](#) ; [H01M10/66](#) ;
[H01M10/613](#)

CCA - [Y02E60/124](#) ; [Y02T10/7005](#) ;
[Y02T10/705](#) ; [Y02T90/12](#) ;
[Y02T10/7072](#) ; [Y02T90/121](#) ;
[Y02T90/14](#) ; [H01M10/34](#) ;
[H01M10/345](#)

PA - LORAL SPACE SYSTEMS INC [US]

TI - BIMODAL **ELECTRIC VEHICLE**
BATTERY SYSTEM

AB - The capacity of a nickel hydroxide based battery is increased when recharge is carried out at a much lower temperature than its discharge. In the instance of a **vehicle** including a load powered by a nickel oxide-hydrogen battery, a generator is provided for **recharging** the battery. A switch is selectively movable between a first position electrically coupling the battery to the load for operating the load and a second position electrically coupling the battery to the generator for **recharging**. Temperature control apparatus maintains the temperature of the battery at a first temperature in the range of approximately 10. degree.C to 50.degree.C when the battery is electrically coupled to the load and is operable for maintaining the battery at a second temperature substantially lower than the first temperature and in the range of approximately 10.degree.C to -30. degree.C when the battery is



electrically coupled to the generator. When the battery is used to propel the **vehicle**, the temperature control apparatus may include a **stationary** heat exchanger external to the **vehicle** to which the battery can be coupled for cooling and an external source of EMF may also be provided to which the battery can be coupled for **recharging**.

[SS 3]