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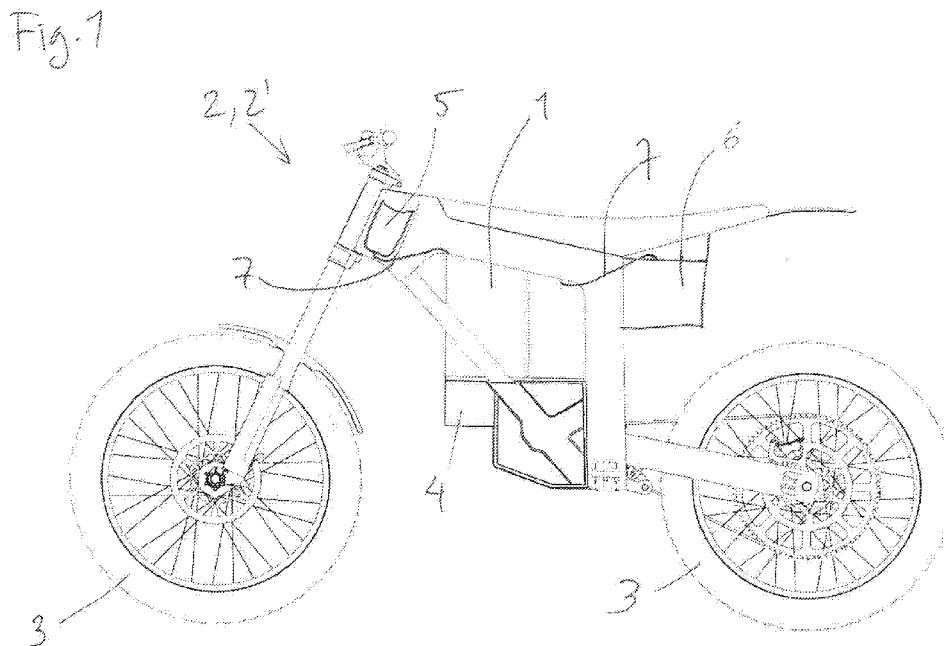
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(54) Title: POWER STATION



(57) Abstract: A power station for charging other battery powered apparatuses, the power station being adapted to be comprised in a motorised vehicle having two or three wheels. A motorcycle comprising such a power station.



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POWER STATION

The present invention concerns a power station and vehicles comprising it.

5 Power stations are previously known and used for charging electrically driven equipment and apparatuses. For example, it could be mobile phones, laptops, electrical screwdrivers, electrical gardening equipment and so on. Such a power station comprises a battery and several outlet sockets, sometimes having a variety of outlet sockets. These power stations are usually stationary.

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It is also previously known to have a mobile power station where the power station is provided with two small wheels along one bottom side, often in the corners, and some kind of handle to be able to pull the power station along the ground on the small wheels.

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It is still cumbersome to bring a power station to a chosen place.

The aim of the present invention is to facilitate the use of a power station and to provide a versatile motorcycle comprising a power station.

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According to a first aspect of the present invention a power station for charging other battery powered apparatuses is provided. The power station being adapted to be comprised in a motorised vehicle having two or three wheels. In this way it is possible to reach more remote places with the power station. Preferably, the power station is also used for the powering of the motorised vehicle.

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According to a second aspect of the present invention a motorcycle comprising a power station is provided. Preferably, the motorcycle is an electrical motorcycle.

According to an embodiment the power station both is used for the powering of the electrical motorcycle and other battery powered apparatuses. Preferably, a controller device
30 controls the usage of the power station.

According to an embodiment holding or supporting devices are provided for holding or supporting apparatuses to be charged by the power station. In such a way it would be possible to also charge the apparatuses during a driving of the motorcycle.

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Fig. 1 shows an embodiment of a power station provided in an electrical motorcycle.

An embodiment of a power station 1 is shown in Fig. 1. It is provided in a motorised vehicle 2 having two or three wheels 3, in the shown embodiment a motorcycle 2', having two
10 wheels 3. Preferably the motorcycle is an electrical motorcycle 2'. The power station 1 may also be used to give power to the motorised vehicle 2.

Preferably, a controller device 4 is provided to control the usage of the power station 1. It may for example control the possibility to charge one or more apparatuses during driving
15 of the motorcycle 2'.

Preferably, holding devices 5 or supporting devices 6 are provided on the motorised vehicle 2, such as a motorcycle 2', for holding or supporting at least one apparatus to be charged. For example, hooks, clamps, boxes, slots or other types of devices may be present wherein
20 battery powered apparatuses may be hold, supported and connected to the power station 1, via loose cables or cables 7 permanently attached to the motorcycle 2'.

The power station 1 preferably comprises at least two different power outlets. For example, 220V outlet, 110V outlet, USB outlet or 12v car outlet.

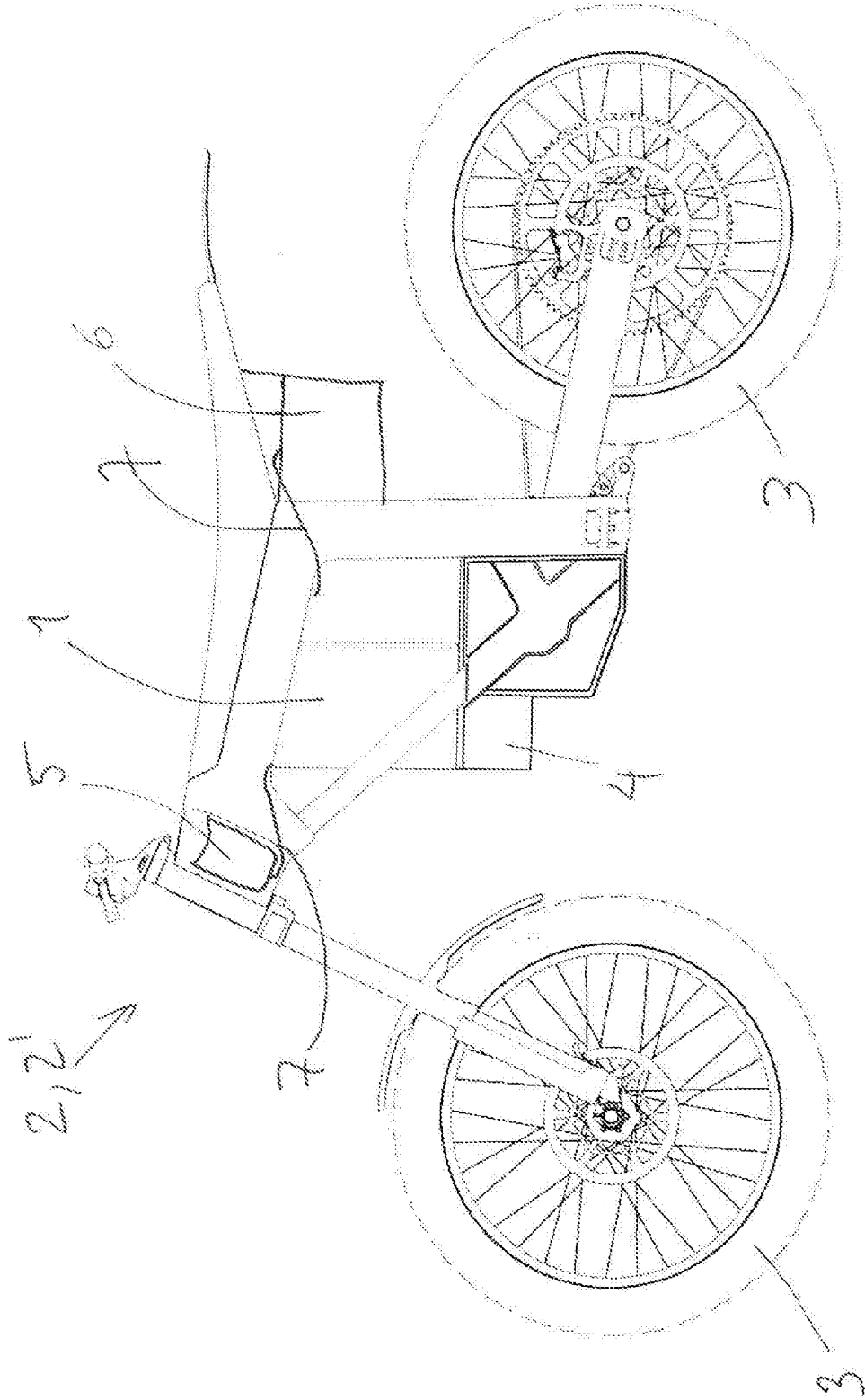
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The power station itself may be charged by for example, 220V, 110V, car charger, solar panels or regenerative braking power during driving.

CLAIMS

1. A power station for charging other battery powered apparatuses, the power station
5 being adapted to be comprised in a motorised vehicle having two or three wheels.
2. The power station according to claim 1, wherein the power station is also used for the powering of the motorised vehicle.
3. A motorcycle comprising a power station according to claim 1 or 2.
4. The motorcycle according to claim 3, wherein the motorcycle is an electrical motor-
10 cycle.
5. The motorcycle according to claim 4, wherein the power station both is used for the powering of the electrical motorcycle and other battery powered apparatuses.
6. The motorcycle according to claim 4 or 5, wherein a controller device controls the usage of the power station.
7. The motorcycle according to claim 4, 5 or 6, wherein holding or supporting devices
15 are provided for holding or supporting apparatuses to be charged by the power station.

Fig. 1



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2796349 A1 (YAMAHA MOTOR CO LTD), 29 October 2014 (2014-10-29); paragraphs [0007], [0011], [0013], [0028], [0033], [0065]-[0068]; figures 1-2,5-8; claim 1 --	1-7
X	US 20130168171 A1 (BUELL ERIK ET AL), 4 July 2013 (2013-07-04); paragraphs [0002], [0005], [0035]-[0036], [0044]-[0045]; figures 1,4; claims 1,15	1-4, 6
A	--	5, 7



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"D" document cited by the applicant in the international application	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2778031 A1 (KAWASAKI HEAVY IND LTD), 17 September 2014 (2014-09-17); paragraphs [0001], [0055], [0057], [0082], [0093]; figure 1; claims 1,11-13	1-4, 6
A	--	5, 7
X	US 20180212448 A1 (LEE PING-LUNG ET AL), 26 July 2018 (2018-07-26); paragraphs [0009]-[0010], [0027]-[0028], [0031]; figure 4; claim 1	1
A	--	2-7
X	US 20030213632 A1 (SCHLESS ELY), 20 November 2003 (2003-11-20); paragraph [0016]; figures 1,4; claim 1	1
A	--	2-7
A	US 20160031506 A1 (LLOYD JAMES ET AL), 4 February 2016 (2016-02-04); abstract; paragraphs [0113], [0202]-[0204]; figures 26A,26B	1-7
A	--	
A	US 20100078246 A1 (SASAGE TAIKI ET AL), 1 April 2010 (2010-04-01); abstract; paragraphs [0020]-[0026]; figures 1-6; claims 1,11,13	1-7
A	--	
A	WO 2013016564 A2 (GOGORO INC ET AL), 31 January 2013 (2013-01-31); abstract; figures 1,3; claim 1	1-7
A	--	
A	US 20130220721 A1 (MATSUDA YOSHIMOTO), 29 August 2013 (2013-08-29); abstract; paragraph [0001]; figures 1-7; claims 1-10	1-7
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SE2020/050465

EP	2796349 A1	29/10/2014	JP	WO2013094597 A1	27/04/2015
			TW	201335020 A	01/09/2013
			WO	2013094597 A1	27/06/2013
US	20130168171 A1	04/07/2013	US	20130168170 A1	04/07/2013
			US	8919483 B2	30/12/2014
EP	2778031 A1	17/09/2014	CN	103874625 A	18/06/2014
			EP	2778032 B1	09/01/2019
			JP	5853025 B2	09/02/2016
			JP	WO2013061387 A1	02/04/2015
			US	20140262568 A1	18/09/2014
			US	9656551 B2	23/05/2017
			US	9463695 B2	11/10/2016
			US	20140292075 A1	02/10/2014
			WO	2013061387 A1	02/05/2013
			WO	2013061484 A1	02/05/2013
US	20180212448 A1	26/07/2018	CN	108365641 A	03/08/2018
			TW	1626813 B	11/06/2018
			TW	201828559 A	01/08/2018
			US	10277045 B2	30/04/2019
US	20030213632 A1	20/11/2003	AU	2003230415 A8	02/12/2003
			WO	03097435 A2	27/11/2003
US	20160031506 A1	04/02/2016	CN	105314038 B	12/11/2019
			CN	105314037 B	12/11/2019
			CN	105314026 B	18/10/2019
			CN	105314036 B	17/09/2019
			CN	105365967 B	19/07/2019
			CN	105314039 B	19/07/2019
			CN	105314035 B	19/04/2019
			CN	105314034 A	10/02/2016
			MX	2015009930 A	26/05/2016
			MX	2015009960 A	10/06/2016
			MX	2015009929 A	10/06/2016
			MX	2015009928 A	08/06/2016
			MX	2015009934 A	26/05/2016
			MX	2015009933 A	26/05/2016
			MX	2015009932 A	26/05/2016
			MX	2015009931 A	26/05/2016
			MX	365106 B	21/05/2019
			MX	364058 B	09/04/2019
			MX	359849 B	11/10/2018
			MX	352020 B	07/11/2017
			MX	351957 B	06/11/2017

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SE2020/050465

				MX	351717 B	26/10/2017
				MX	351716 B	26/10/2017
				RU	2015131813 A	03/02/2017
				RU	2684825 C2	15/04/2019
				RU	2697178 C2	12/08/2019
				RU	2688405 C2	21/05/2019
				RU	2688116 C2	17/05/2019
				RU	2683357 C2	28/03/2019
				RU	2682945 C2	22/03/2019
				RU	2681993 C2	14/03/2019
				RU	2679518 C2	11/02/2019
				RU	2015131812 A3	06/02/2019
				RU	2015131804 A3	06/02/2019
				RU	2015131806 A3	04/12/2018
				RU	2015131802 A3	22/01/2019
				RU	2015131805 A3	09/11/2018
				RU	2015131809 A3	14/11/2018
				RU	2015131810 A	02/02/2017
				US	10336393 B2	02/07/2019
				US	9573646 B2	21/02/2017
				US	10202161 B2	12/02/2019
				US	9963185 B2	08/05/2018
				US	9902452 B2	27/02/2018
				US	20170259879 A1	14/09/2017
				US	9701356 B2	11/07/2017
				US	9663177 B2	30/05/2017
				US	9616959 B2	11/04/2017
				US	9610996 B2	04/04/2017
				US	20160031525 A1	04/02/2016
				US	20160031524 A1	04/02/2016
				US	20160031517 A1	04/02/2016
				US	20160031516 A1	04/02/2016
				US	20160031514 A1	04/02/2016
				US	20160031513 A1	04/02/2016
				US	20160031507 A1	04/02/2016
US	20100078246 A1	01/04/2010		CN	101712351 B	25/07/2012
				EP	2168862 B1	27/07/2016
				TW	201012695 A	01/04/2010
				TW	I377149 B	21/11/2012
				US	8418795 B2	16/04/2013

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/SE2020/050465

WO	2013016564 A2	31/01/2013	CN	103858305 A	11/06/2014
			EP	2737598 A4	02/09/2015
			JP	6026535 B2	16/11/2016
			JP	2014529119 A	30/10/2014
			TW	201319994 A	16/05/2013
			TW	I537860 B	11/06/2016
			US	9830753 B2	28/11/2017
			US	20130030580 A1	31/01/2013
US	20130220721 A1	29/08/2013	CN	103153770 A	12/06/2013
			EP	2636583 A1	11/09/2013
			JP	WO2012059959 A1	12/05/2014
			JP	5715642 B2	13/05/2015
			US	9010476 B2	21/04/2015
			WO	2012059959 A1	10/05/2012