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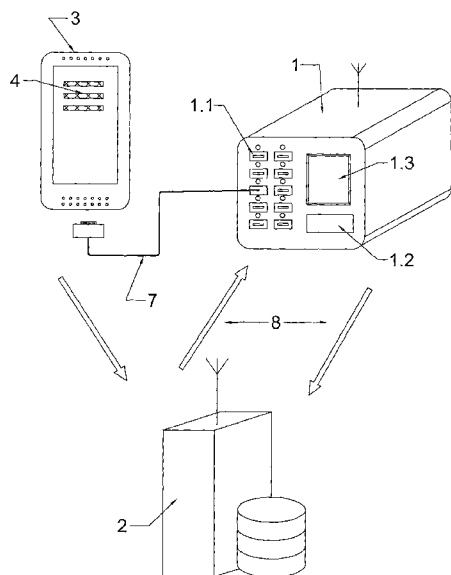
(54) Title: CHARGING UNIT AND CHARGING METHOD OPERATED BY MOBILE NOTIFICATION

FIGURE 1

(57) Abstract: The present invention, which relates to the charging unit and charging method activating the charging of a single or multiple port (USB, jack, socket, plug etc.) charging unit from mobile devices (mobile phone, smart phone, tablet etc.) through a short message (SMS) and/or mobile applications; enabling payment in consideration of the charging process, selection of the charging port, purchase of charging units, realization of various settings and selections with respect to the charging process, is generally composed of; Charging unit(1) with a single or multiple port(1.1); Charging connection (7) providing the engagement of the mobile device(3) desired to be charged to the charging unit(1); Short message(4) text and/or mobile application(5) providing the connection of the mobile device(3) desired to be charged to the charging unit(1) and transfer of the information relevant to charging and effecting the payment for charging; The mobile device ID information(6) transferred to the charging unit(1) when the mobile device(3) desired to be charged is engaged to the charging unit(1) through charging connection(7); GSM operator(2) server enabling response to the charging demand transferred to the charging unit(1) through short message(4) and/or mobile application(5) and/or mobile device ID information(6) and activation of the relevant port of the relevant charging unit(1) and collection of the payment for the charging; The charging unit code(1.2) and port(1.1) number added to the short message(4) text written for the charging process and/or mobile application(5); The screen(1.3) enabling the monitoring of the information related to charging, over the charging unit(1).

CHARGING UNIT AND CHARGING METHOD OPERATED BY MOBILE NOTIFICATION

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The present invention relates to the charging unit and charging method activating the charging of a single or multiple port (USB, jack, socket, plug etc.) charging unit from mobile devices (mobile phone, smart phone, tablet etc.) through a short message (SMS) and/or mobile applications; enabling payment in consideration of the charging process, selection of the charging port, purchase of charging units, realization of various settings and selections with respect to the charging process.

One of the usage problems of the mobile devices (mobile phone, smart phone, tablet etc.), which constitute a significant part of daily life, is the charging problems. The mobile devices with batteries getting low or running out during use can be charged by the help of various units in the state of the art. Specifically, portable charging units independent of the network electricity (with battery), which can charge more than one mobile devices simultaneously, offer quite effective solutions to the charging problem of the mobile devices. Mentioned charging units enable the charging of the mobile devices in cases where network electricity cannot be accessed and at locations such as restaurants, outdoor recreation areas, airports, terminals, intercity passenger vehicles, ships, schools, hospitals etc.

Along with the spread of portable charging units with batteries and expansion of their fields of use; these units also provide financial income. For this purpose, charging units are developed in the state of the art, which allow charging upon receipt of payments such as tokens, metal coins, credit cards etc. However, while these units offer charging as independent of the network electricity, they make the charging process difficult due to some other disadvantages. For example; in the charging units with tokens; the user is required to go to the relevant enterprise in order to get the token which operates the concerned charging unit. This state causes loss of time and is disadvantageous in cases of emergency. For example; in the charging units that operate with metal coins; the user is required to have the appropriate coin for the charging unit. Various security issues arise in the charging units that collect payment via credit card.

Due to the disadvantages mentioned above, there is a need for charging payment through securer, more practical and faster payment systems in the state of the art.

The present invention, which relates to the charging unit and charging method activating the charging of a single or multiple port (USB, jack, socket, plug etc.) charging unit from mobile devices (mobile phone, smart phone, tablet etc.) through a short message (SMS) and/or mobile applications; enabling payment in consideration of the charging process, selection of the charging port, purchase of charging units, realization of various settings and selections with respect to the charging process, completely overcomes the difficulties mentioned above, and is characterized by;

- 10 - Activation of the charging unit by a short message and/or a mobile application (on-off, stand by etc.);
- Ability to select the port to which the mobile device shall be engaged for charging through a short message and/or mobile application;
- Availability of port number indicated in the short message text related to the charging process, in the multiple port charging units;
- 15 - Availability of the charging unit codes indicated in the short message text related to the charging process, in the charging units;
- Ability to enter the charging unit codes and port numbers into the relevant areas in the mobile application;
- 20 - Adjustment of the charging time and charging percentage to be applied to the mobile device through short message and/or mobile application;
- If charging time / percentage is mentioned in the short message and/or mobile application; automatic interruption of the charging process when the mentioned time / percentage is reached;
- 25 - Consequently, subjecting each mobile device to charging process as required and as requested;
- Reflection of the charging fees to the user's invoice by the relevant GSM company in the charging unit operated through short message and/or mobile application,
- Payment of the charging fees by units in prepaid users;
- 30 - Calculation of the charging fees as based on the volume of the relevant charging process;
- Purchase of charging units in advance and using such charging units when required for the charging processes, again through short message and/or mobile application;

- In order to be able to send a short message and/or to operate the mobile application for the charging process of the mobile devices with completely empty batteries; charging the mobile device by the charging unit for a specific period of time (about 1-2 minutes) as free;
- 5 - With respect to the mentioned free charging; ability to demand identification of QR code, barcode, SIM etc. and information sharing on social media and the activities such as "like";
- Initiation of the charging process as the user enters the charging unit code and/or the port to which the mobile device shall be engaged and/or charging time/percentage into
10 the short message text and/or the relevant areas in the mobile application
- GSM operator receiving the information contained in the short message and/or mobile application;
- Activation of the charging unit and the relevant port upon reaching the user on the charging unit by GSM operator receiving the information contained in the short
15 message and/or mobile application and initiation of the energy transfer for the charging procedure;
- In another application of the charging method:
When the mobile device is engaged on the charging unit; introduction of the identification information (IMEI, Mobile device registration number, SIM number,
20 Telephone number etc.) of the mobile device to the charging unit by the mentioned mobile application;
- Activation of the charging unit and the relevant port upon reaching the user on the charging unit by GSM operator receiving the information mentioned above and initiation of the energy transfer for the charging procedure
- 25 - Realization of the charging process by reflection of the charging fees onto the invoice or the units through short message and/or mobile application thanks to the charging unit operated by mobile notification and charging method;
- Short message and/or mobile application used in order to initiate the charging process being an easy, practical method applicable under any condition.

The present invention is explained in detail through sampling with the attached drawings; such drawings are as;

Figure 1 is the diagram of the charging unit operated with mobile notification and charging method, charging method with short message.

- 5 **Figure 2** is the diagram of the charging unit operated with mobile notification and charging method, charging method with mobile application.

Figure 3 is the diagram of the charging unit operated with mobile notification and charging method, charging method with mobile device ID information.

Legend:

10	NO	NAME OF THE PART
	1	Charging unit
	1.1	Port
	1.2	Charging unit code
	1.3	Screen
15	2	GSM operator
	3	Mobile device
	4	Short message
	5	Mobile application
	6	Mobile device ID information
20	7	Charging connection
	8	Information transfer route

The present invention, which relates to the charging unit and charging method activating the charging of a single or multiple port (USB, jack, socket, plug etc.) charging unit from mobile devices (mobile phone, smart phone, tablet etc.) through a short message (SMS) and/or mobile applications; enabling payment in consideration of the charging process, selection of the charging port, purchase of charging units, realization of various settings and selections with respect to the charging process, is generally characterized by;

- Charging unit(1) with a single or multiple port(1.1);
- Charging connection (7) providing the engagement of the mobile device(3) desired to be charged to the charging unit(1)
- Short message(4) text and/or mobile application(5) providing the connection of the mobile device(3) desired to be charged to the charging unit(1) and transfer of the information relevant to charging and effecting the payment for charging;
- The mobile device ID information(6) transferred to the charging unit(1) when the mobile device(3) desired to be charged is engaged to the charging unit(1) through charging connection(7);
- GSM operator(2) server enabling response to the charging demand transferred to the charging unit(1) through short message(4) and/or mobile application(5) and/or mobile device ID information(6) and activation of the relevant port(1.1) of the relevant charging unit(1) and collection of the payment for the charging;
- The charging unit code(1.2) and port(1.1) number added to the short message(4) text written for the charging process and/or mobile application(5);
- The screen(1.3) enabling the monitoring of the information related to charging, over the charging unit(1).

The use of the invention is as follows:

In general, three methods are applied for the charging process on the charging unit(1) operating by mobile notification. These methods are as; short message(4), mobile application(5), and mobile device ID information(6) transfer. When the user desires to charge the mobile device(3) on the charging unit(1), he uses a method which is appropriate for himself and the equipment he possesses. With the mentioned methods; the procedures such as activation(start/stop) of the charging unit(1), selection of the port(1.1) to which the mobile device(3) shall be engaged for charging, realization of the general settings related to the charging, determination of the charging time/percentage, collection of the payment in

consideration of the charging process, can be carried out. The mentioned processes can be identified by writing a short message(4) text for which codes are determined and/or by entering the relevant information into the relevant areas in the mobile application(5). These information identified by the short message(4) text and/or the mobile application(5) are transmitted to the relevant GSM operator(2). When the information related to charging is transmitted to the GSM operator(2); the GSM operator(2) activates the charging unit(1) and the relevant port(1.1). Consequently the mobile device(3) can be charged by connecting to the relevant port(1.1) by the charging connection(7). The charging fees are reflected by the GSM operator(2) to the invoice of the mobile device(3) or the remaining units.

In the charging process initiated by transfer of the mobile device ID information(6); the user engages his mobile device(3) to the charging unit(1) through the charging connection(7). When the mobile device(3) is engaged to the charging unit(1); the mobile device ID information(6) (IMEI, Mobile device registration number, SIM number, Telephone number etc.) is transmitted to the charging unit(1) through the mobile application(5) or any other information transfer method. Such information transferred to the charging unit(1) is transmitted to the GSM operator(2) and is confirmed. The charging process is started upon verification of the mobile device ID information(6) by the GSM operator(2). In this method, the settings related to the charging are enabled over the setup buttons on the charging unit(1).

Any information with respect to the charging process can be followed up over the screen(1.3) on the charging unit(1).

CLAIMS

1- The present invention relates to the charging unit operated by a mobile notification and charging method and it is characterized by;

- 5 - The user reading the charging unit code(1.2) and the port(1.1) number to which he shall engage his mobile device(3), over the charging unit(1) through which he desires to charge his mobile device(3);
- The user writing the short message(4) text containing the message template predetermined for the charging unit code(1.2) and the port(1.1) number and/or the
10 charging percentage/time and/or charging process and transmitting it to the relevant GSM service number by using his mobile device(3);
- Transmitting the short message(4) text containing the information related to the charging process to the GSM operator(2);
- The GSM operator(2) activating the mentioned charging unit(1) and the mentioned
15 port(1.1) in compliance with the settings determined, as based on the information transmitted by a short message(4);
- Engaging the mentioned mobile device(3) to the charging unit(1) through charging connection(7) upon activation of the mentioned port(1.1);
- Charging of the mobile device(3) for which charging connection(7) is realized;
- 20 - Transfer of the charging fees by the GSM operator(2) to the invoice or the units of the mentioned mobile device(3) following the charging process
 in the charging processes realized by a short message(4).

2- The present invention relates to the charging unit operated by a mobile notification and charging method and it is characterized by;

- 25 - The user reading the charging unit code(1.2) and the port(1.1) number to which he shall engage his mobile device(3), over the charging unit(1) through which he desires to charge his mobile device(3);
- The user entering the charging unit code(1.2) and the port(1.1) number and/or charging percentage/time and/or other settings related to the charging, to the relevant
30 areas in the mobile application(5) through his mobile device(3) and realizing the process of sending;

- Transmitting the mobile application(5) definition containing the information related to the charging process to the GSM operator(2)
- The GSM operator(2) activating the mentioned charging unit(1) and the mentioned port(1.1) in compliance with the settings determined, as based on the information transmitted by the mobile application(5);
- Engaging the mentioned mobile device(3) to the charging unit(1) through charging connection(7) upon activation of the mentioned port(1.1);
- Charging of the mobile device(3) for which charging connection(7) is realized;
- Transfer of the charging fees by the GSM operator(2) to the invoice or the units of the mentioned mobile device(3) following the charging process in the charging processes realized by a mobile application(5).

3- The present invention relates to the charging unit operated by a mobile notification and charging method and it is characterized by;

- The user engaging his mobile device(3) to any port(1.1) of the charging unit(1) through the charging connection(7)
- The mobile device ID information(6) (IMEI, Mobile device registration number, SIM number, Telephone number etc.) being transmitted to the charging unit(1) through the mobile application(5) or any other information transfer method, following the engagement of the mobile device(3) to the charging unit(1)
- Transferring such information to the GSM operator(2), which is transmitted to the charging unit(1)
- The GSM operator(2) confirming the mobile device ID information(6);
- The GSM operator(2) initiating the charging process upon verification of the mobile device ID information(6)
- Transfer of the charging fees by the GSM operator(2) to the invoice or the units of the mentioned mobile device(3) following the charging process

in the charging processes realized by transfer of the mobile device ID information(6).

4- It is the charging method mentioned in Claim 3 and it is characterized by; carrying out all the relevant settings through the setup buttons on the charging unit(1).

5- It is the charging method mentioned in Claims 1, 2 and 3 and it is characterized by; charging the mobile device(3) by the charging unit(1) for a specific period of time as free in order to be able to send a short message(4) and/or to operate the mobile application(5) for the charging process of the mobile devices(3) with completely empty batteries.

5 6- It is the charging unit mentioned in Claims 1, 2 and 3 and it is characterized by having a charging unit code(1.2) and a port(1.1) numbers.

7- It is the charging unit mentioned in Claims 1, 2 and 3 and it is characterized by; having a screen(1.3) enabling the follow up of the information related to the charging over the charging unit(1).

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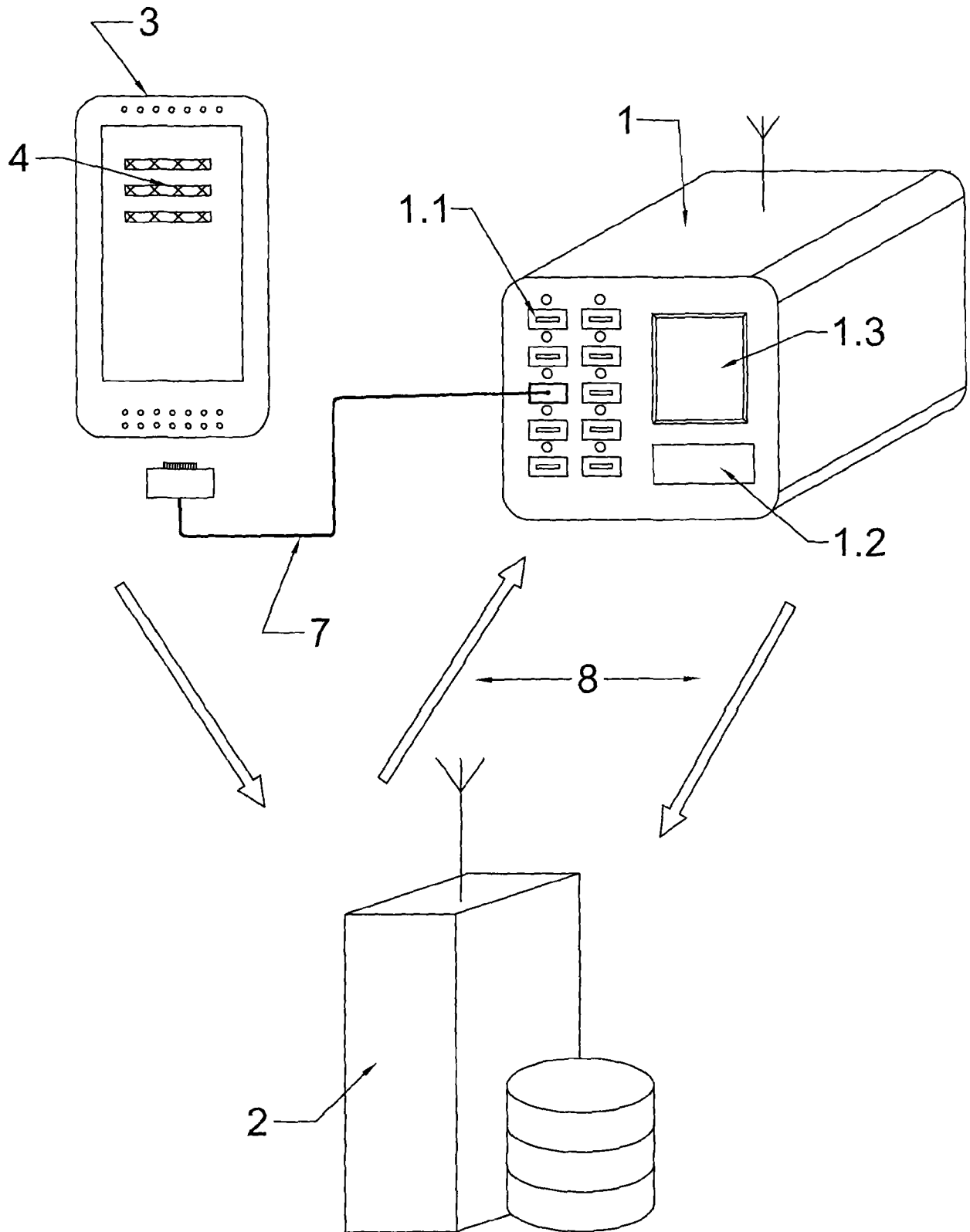


FIGURE 1

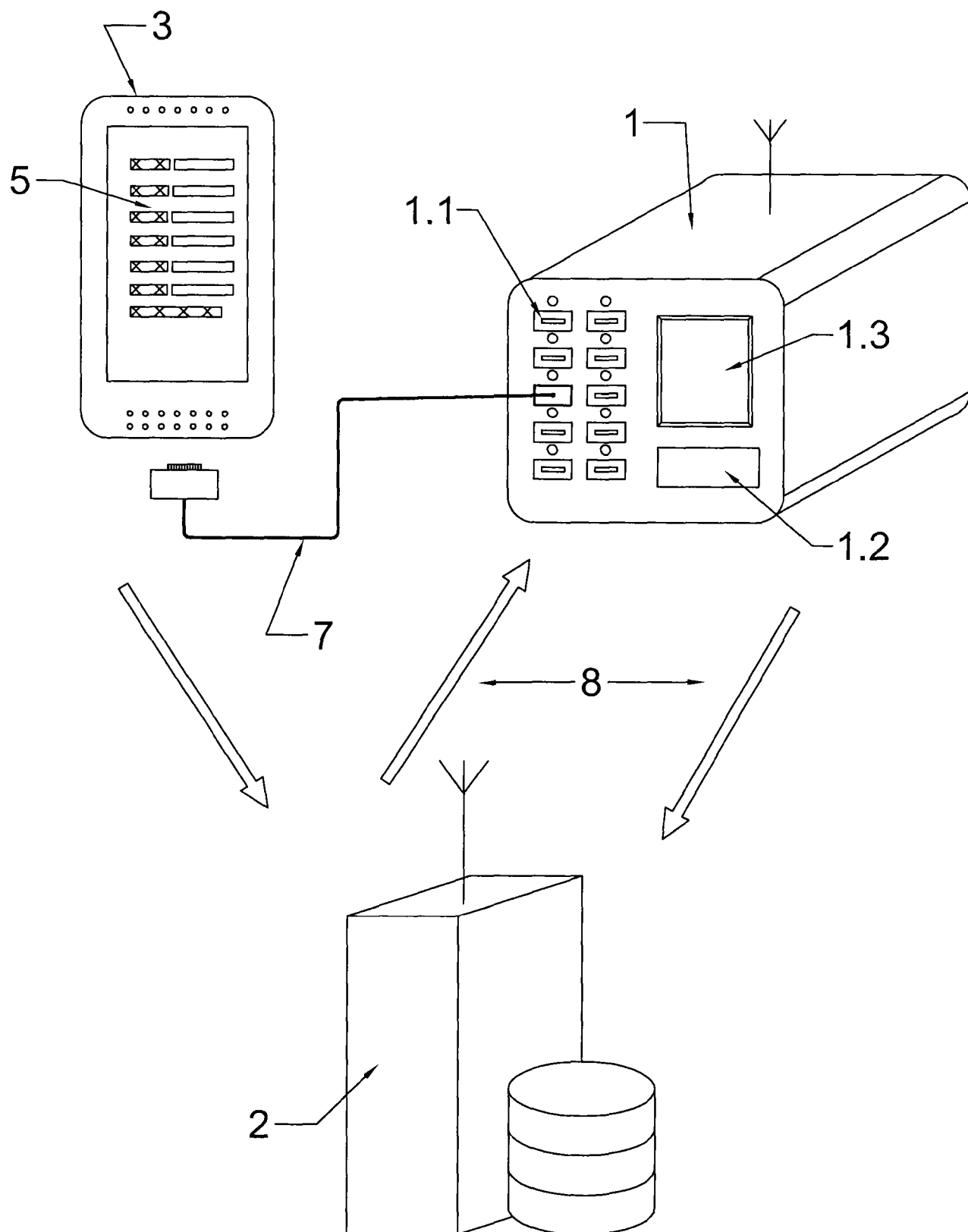


FIGURE 2

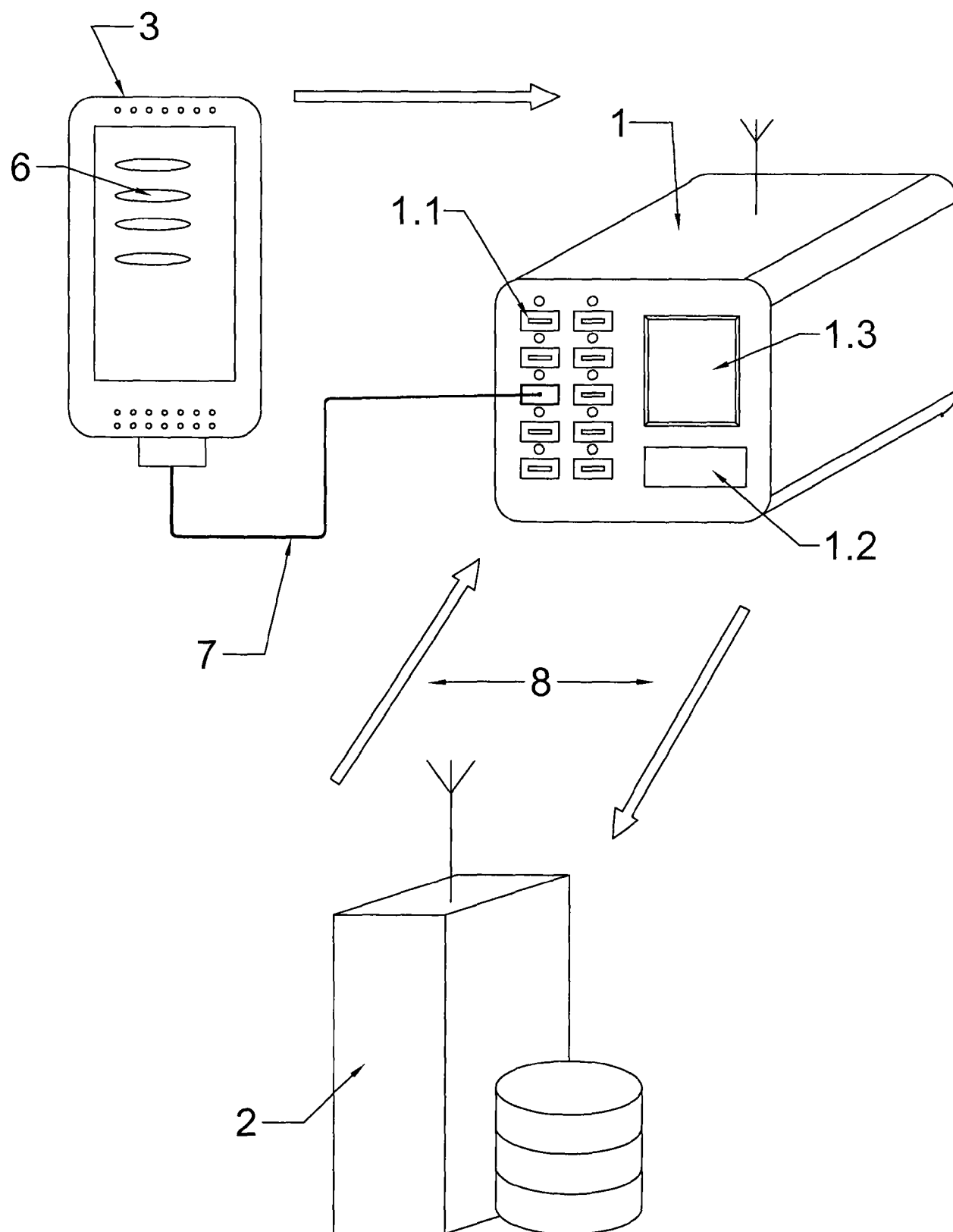


FIGURE 3

INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2015/000288

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06Q30/06 G06Q20/22
ADD.

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)

G06Q

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/081124 A1 (ODICORP CO LTD [KR]; YUN YOUNG BOK [KR]) 1 September 2005 (2005-09-01) abstract page 1, line 5 - line 16 page 2, line 7 - line 20 page 3, line 6 - line 12 page 4, line 10 - page 12, line 22 -----	1-7
X	US 2014/239883 A1 (HOBSON IAN TIMOTHY [GB] ET AL) 28 August 2014 (2014-08-28) abstract paragraph [0091] - paragraph [0108] figures 1,7 ----- -/--	1-7

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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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

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/TR2015/000288

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/106329 A1 (DONNELLY RICHARD B [US] ET AL) 5 May 2011 (2011-05-05) abstract paragraph [0006] - paragraph [0007] paragraph [0056] paragraph [0085] - paragraph [0091] -----	1-7

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/TR2015/000288

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US 2014239883 A1	28-08-2014	GB 2512817 A	15-10-2014
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		WO 2014127998 A2	28-08-2014

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