



(12) **United States Patent**  
**Hunter et al.**

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(54) **POWER SUPPLY UNIT**

(56) **References Cited**

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(\* ) Notice: Subject to any disclaimer, the term of this  
 patent is extended or adjusted under 35  
 U.S.C. 154(b) by 0 days.

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**H02J 9/06** (2006.01)  
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(57) **ABSTRACT**

A power supply unit for supplying power to a device has a rechargeable, main battery; a charging arrangement for charging the main battery; a non-rechargeable back-up battery; load terminals for connection to a load; and a control unit for controlling supply of power to the load primarily from the main battery and secondarily from the back-up battery. The device is, in particular, a single bay, stand alone parking meter. In the event that the main battery runs low, the control unit is configured to supply power to the load from both the main battery and the back-up battery or only from the back-up battery. The back-up battery is easily replaceable, and the power supply unit has a bay, with connectors for receiving the back-up battery. The main battery is charged from solar panels. A communication device is provided to communicate status messages wirelessly to a control system.

(52) **U.S. Cl.**  
 CPC ..... **H02J 9/061** (2013.01); **G07F 17/24**  
 (2013.01); **H02J 7/0021** (2013.01);  
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(58) **Field of Classification Search**  
 None  
 See application file for complete search history.

**25 Claims, 4 Drawing Sheets**

