



(12) **United States Patent**
Liu

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(54) **POWER MONITORING MODULE WITH DISPLAY UNIT FOR ELECTRICAL POWER SOURCE DEVICE**

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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 135 days.

(21) Appl. No.: **09/642,839**

(22) Filed: **Aug. 22, 2000**

(51) **Int. Cl.⁷** **G08C 19/04**

(52) **U.S. Cl.** **340/870.11; 340/310.08; 340/870.02**

(58) **Field of Search** **340/870.11, 310.08, 340/656, 870.02**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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* cited by examiner

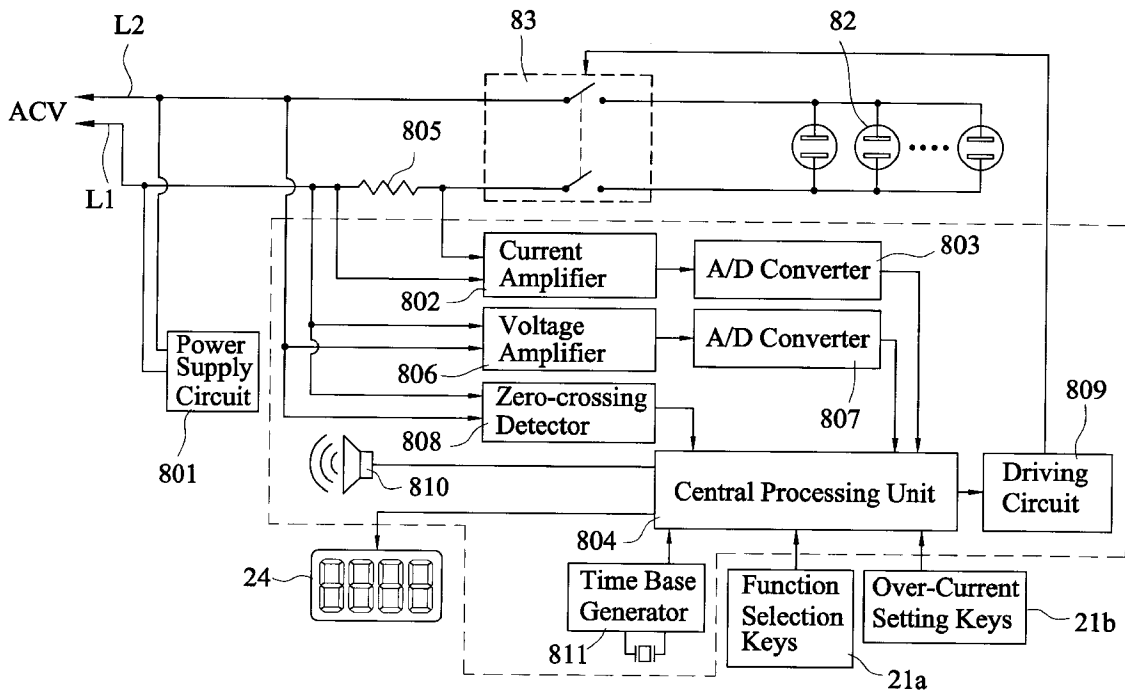
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(57) **ABSTRACT**

A power monitoring module with a display unit configured to be mounted on an electrical power source device, such as uninterrupted power supply or a power strip, for indicating a plurality of electrical parameters is disclosed. The power monitoring module includes a casing provided with a central open area and a plurality of through holes thereon, and a printed circuit board are mounted to the casing. A control circuit is arranged on the printed circuit board and electrically coupled to the power source device for detecting the electrical parameters of the electric appliance plugged on the power source device. A plurality of operation keys are arranged on the printed circuit board, corresponding to the through holes formed on the casing. A display unit arranged on the printed circuit board, corresponding to the central open area of the casing for displaying at least one of the plurality of electrical parameters detected by the control circuit.

2 Claims, 10 Drawing Sheets



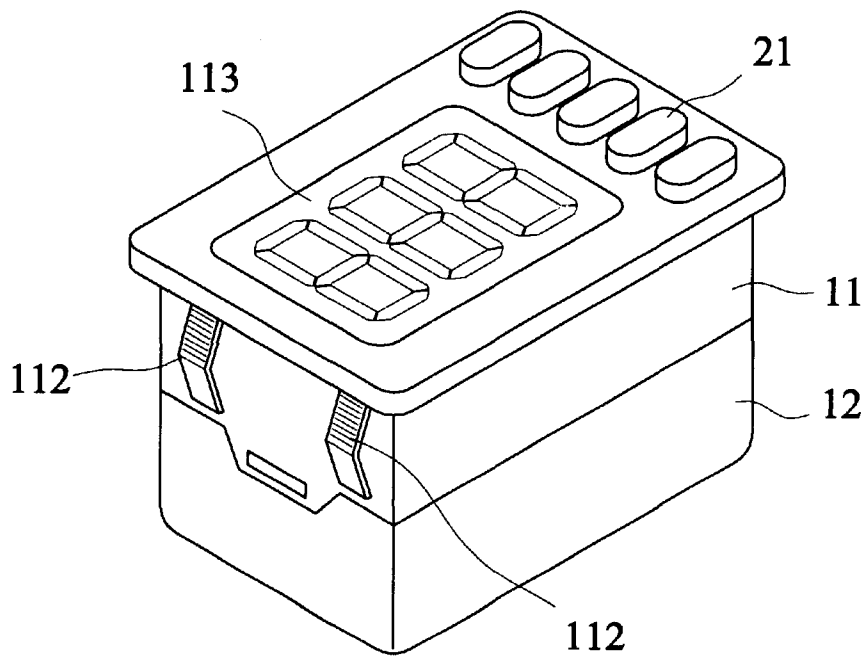


FIG.1

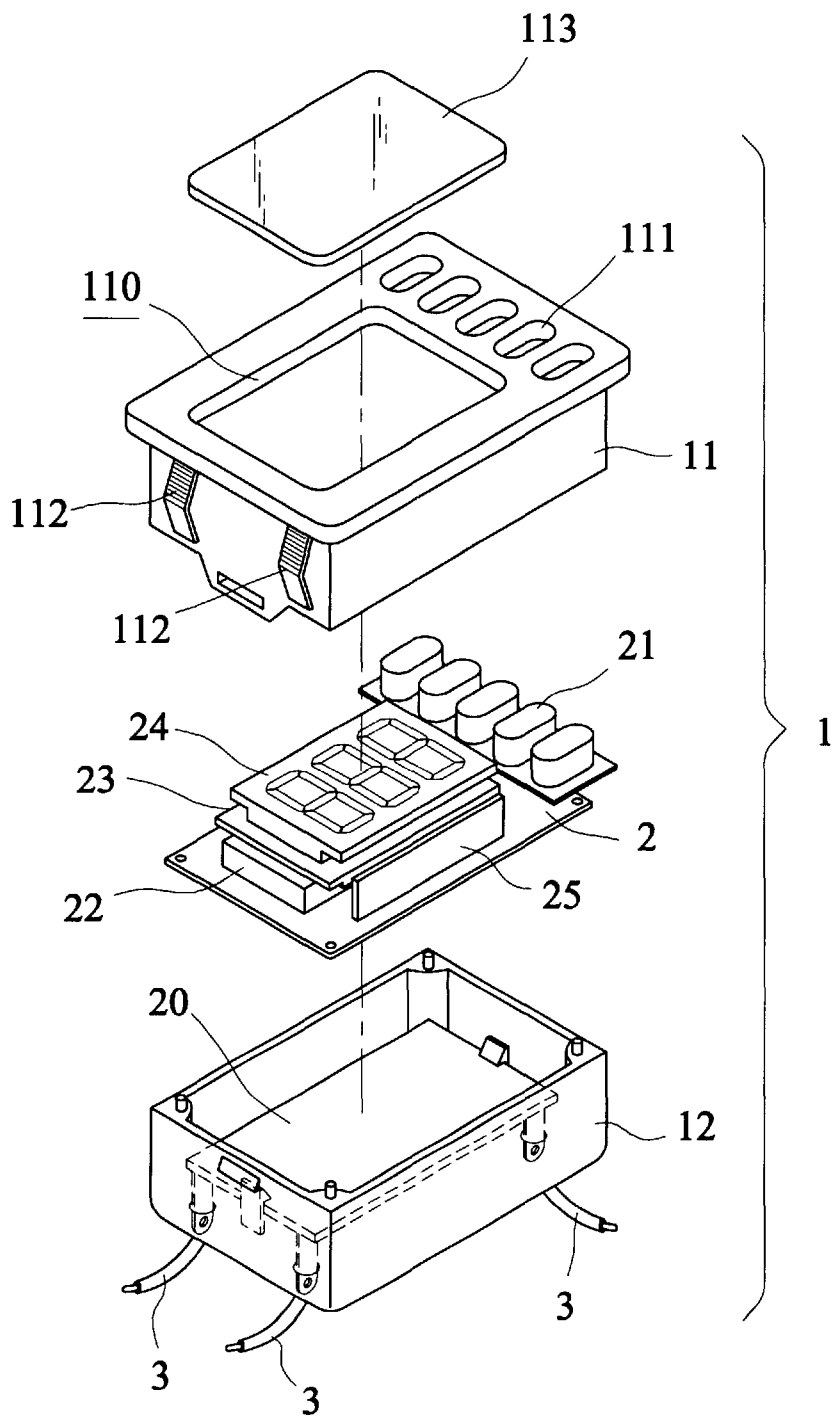


FIG.2

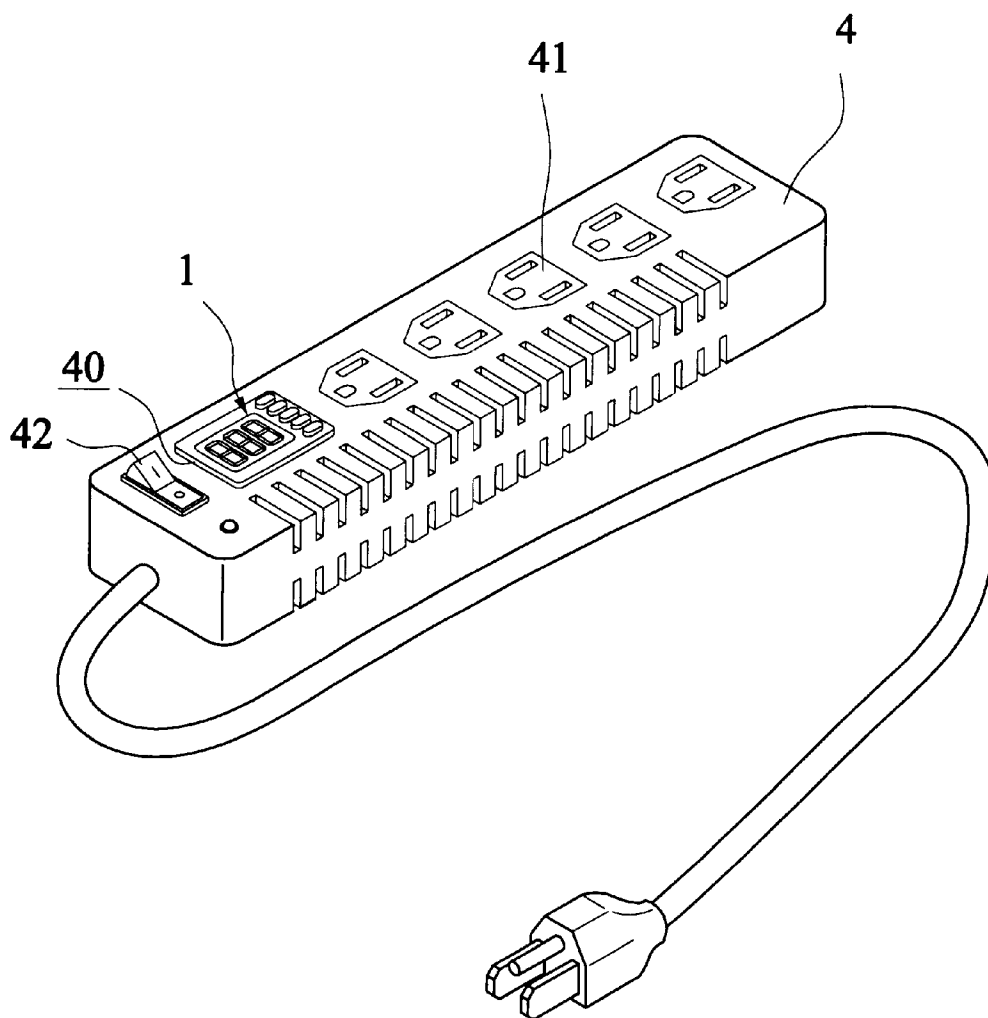


FIG.3

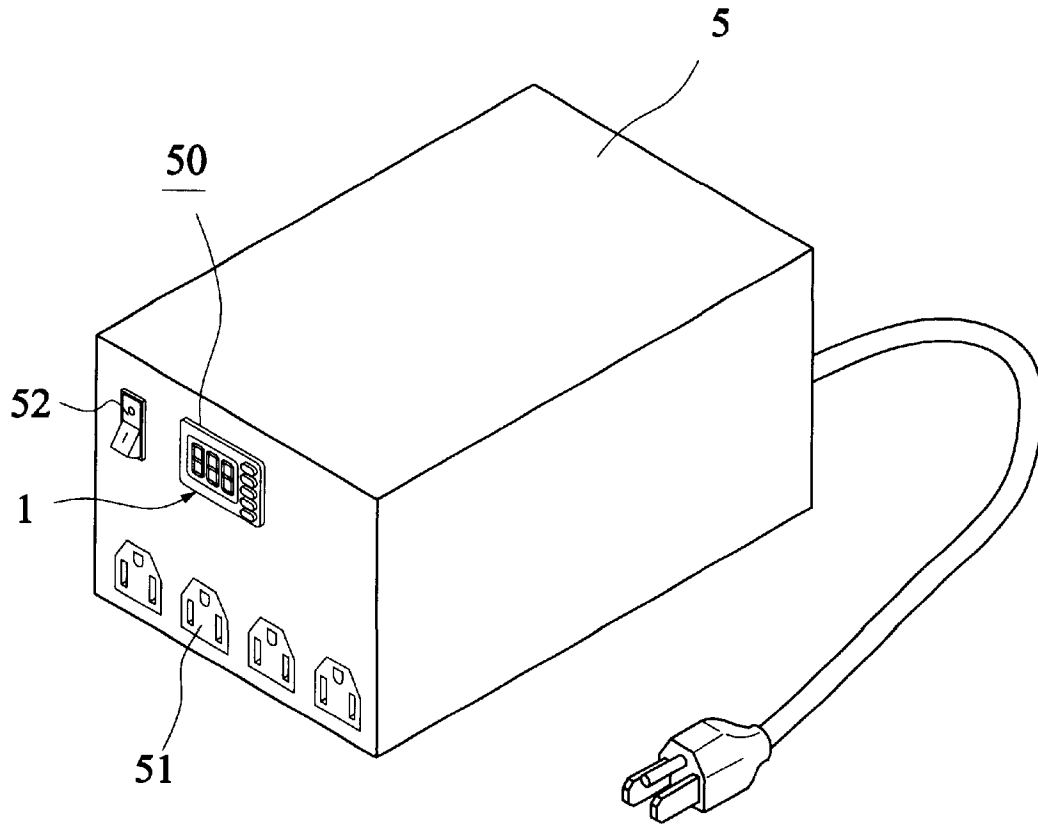


FIG. 4

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