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**Simoes et al.**

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(54) **PORTABLE BATTERY CHARGER**

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(57) **ABSTRACT**

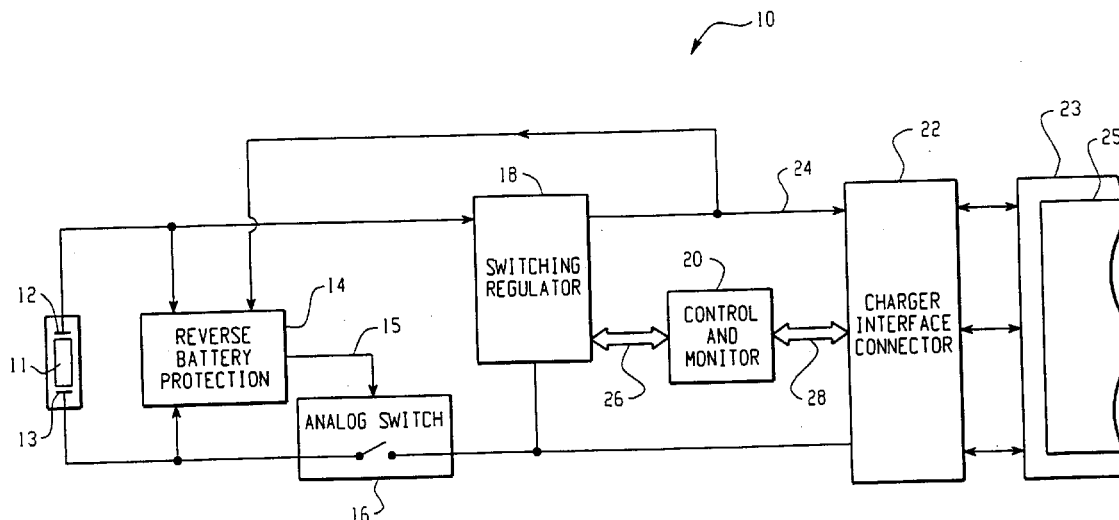
A portable battery charger for a mobile device having a rechargeable battery includes battery contacts, a switching regulator, and a charger interface. The battery contacts are configured to receive a battery having a low-voltage value. The switching regulator is coupled to the battery contacts and configured to draw the low-voltage value from the battery and convert the low-voltage value to a charger output. The charger interface is configured to electrically engage the mobile device and is further configured to couple the charger output from the switching regulator to the rechargeable battery in the mobile device.

(21) Appl. No.: **10/443,286**

(22) Filed: **May 22, 2003**

**Related U.S. Application Data**

(63) Continuation of application No. 10/007,848, filed on Nov. 5, 2001, now Pat. No. 6,583,601.



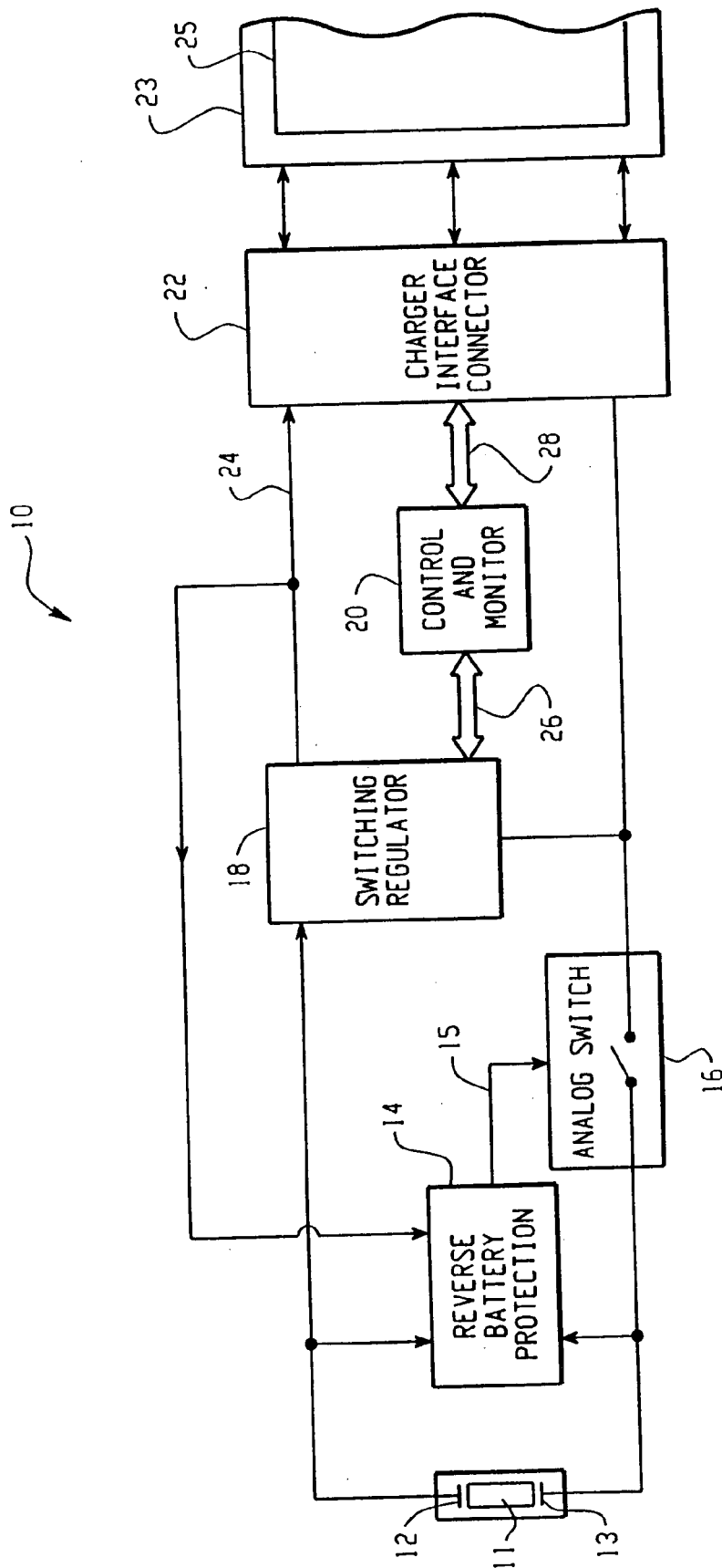


Fig. 1

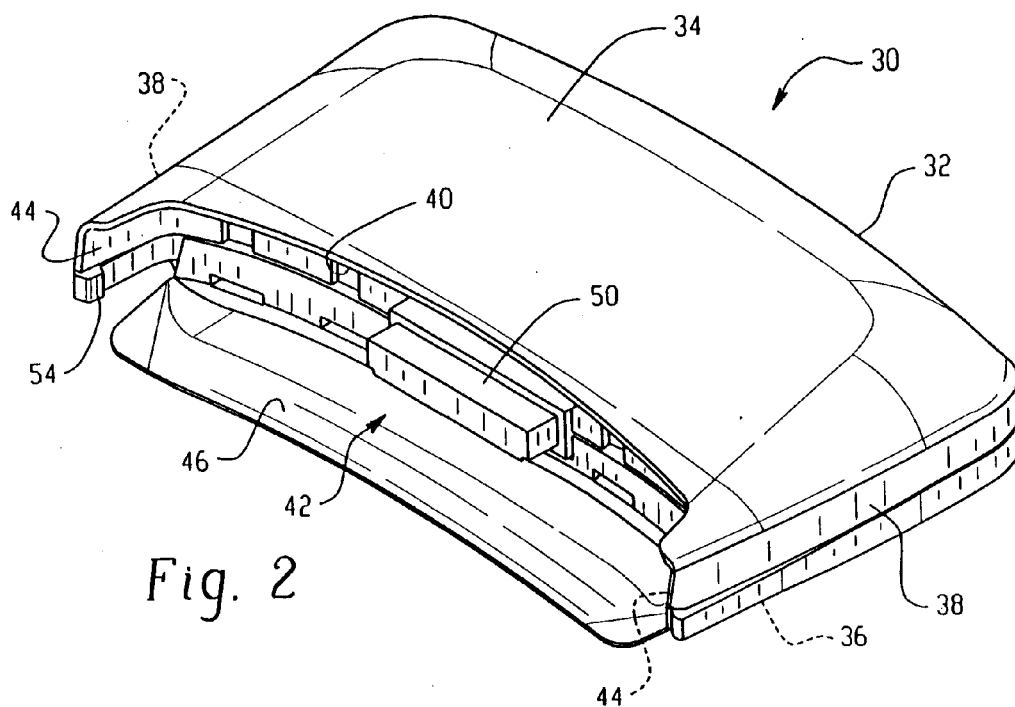


Fig. 2

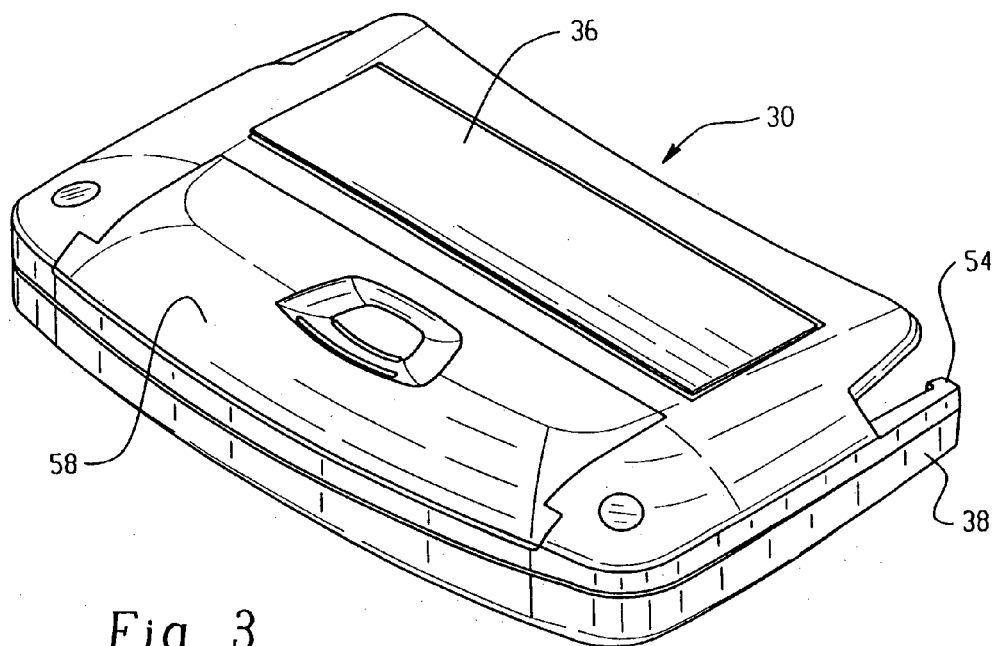


Fig. 3

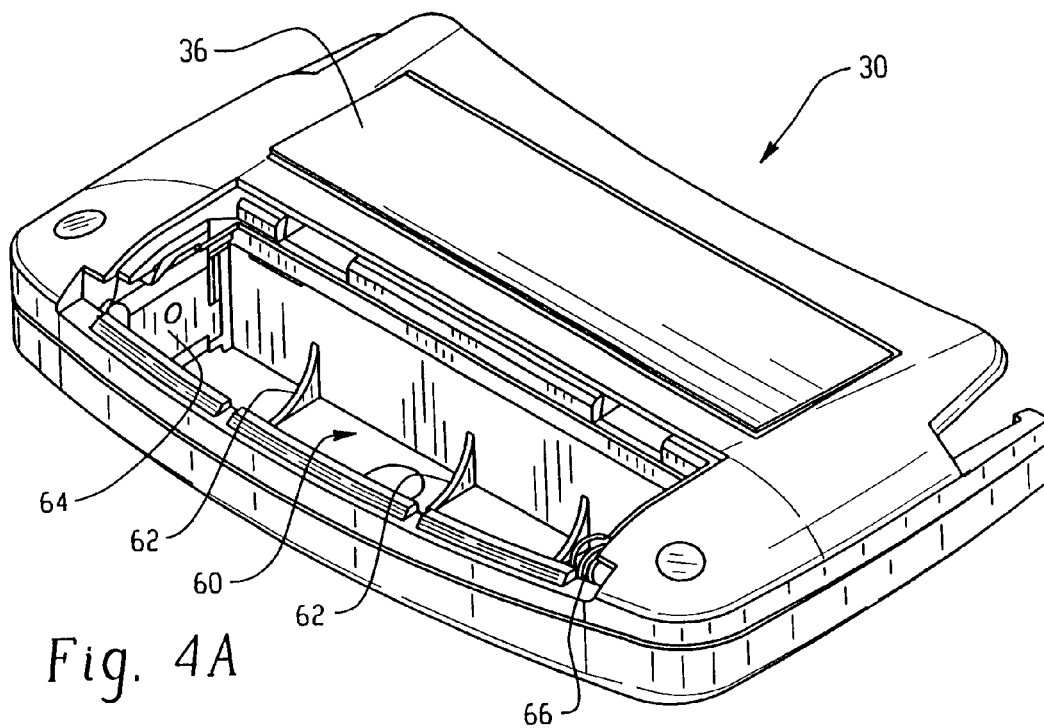


Fig. 4A

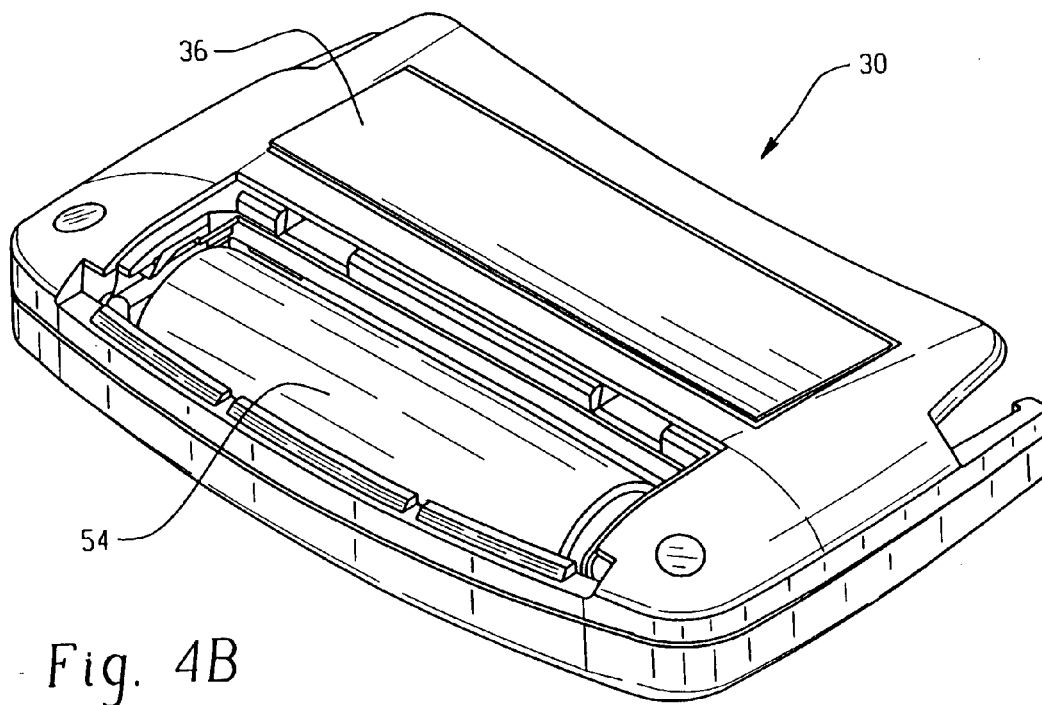


Fig. 4B

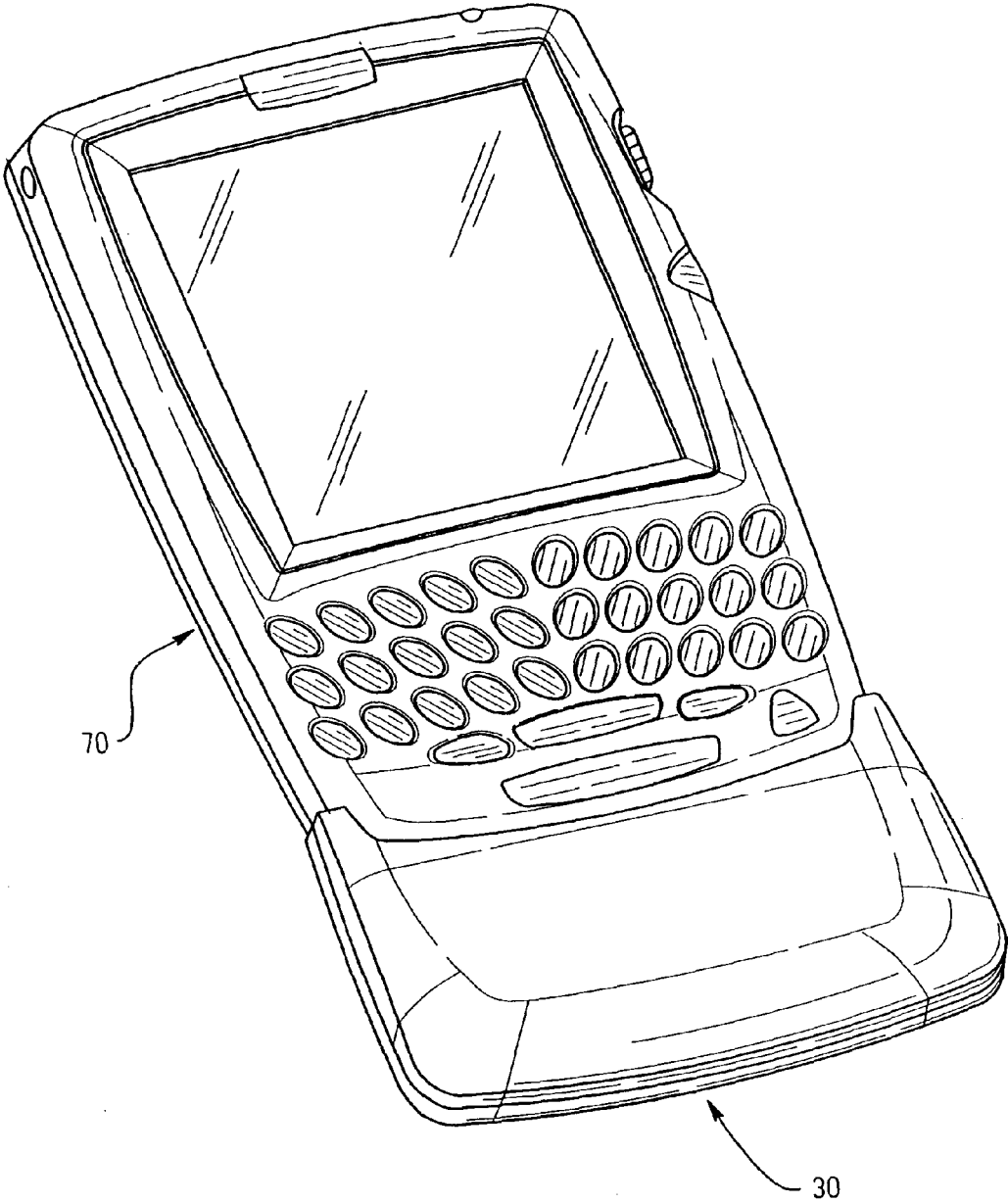


Fig. 5

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