



US006661197B2

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

(10) **Patent No.:** **US 6,661,197 B2**
(45) **Date of Patent:** **Dec. 9, 2003**

(54) **WIRELESS BATTERY CHARGING SYSTEM FOR EXISTING HEARING AIDS USING A DYNAMIC BATTERY AND A CHARGING PROCESSOR UNIT**

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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.

(21) Appl. No.: **10/255,688**

(22) Filed: **Sep. 27, 2002**

(65) **Prior Publication Data**

US 2003/0048095 A1 Mar. 13, 2003

Related U.S. Application Data

(62) Division of application No. 10/080,240, filed on Feb. 22, 2002, now Pat. No. 6,498,455.

(60) Provisional application No. 60/270,147, filed on Feb. 22, 2001.

(51) **Int. Cl.**⁷ **H02J 7/00**

(52) **U.S. Cl.** **320/108; 320/107**

(58) **Field of Search** 320/108, 107, 320/112, 113, 115; 361/145, 146, 133

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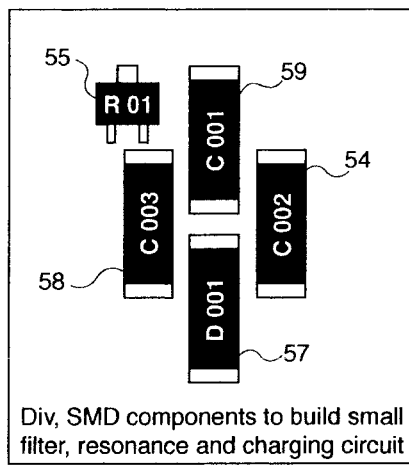
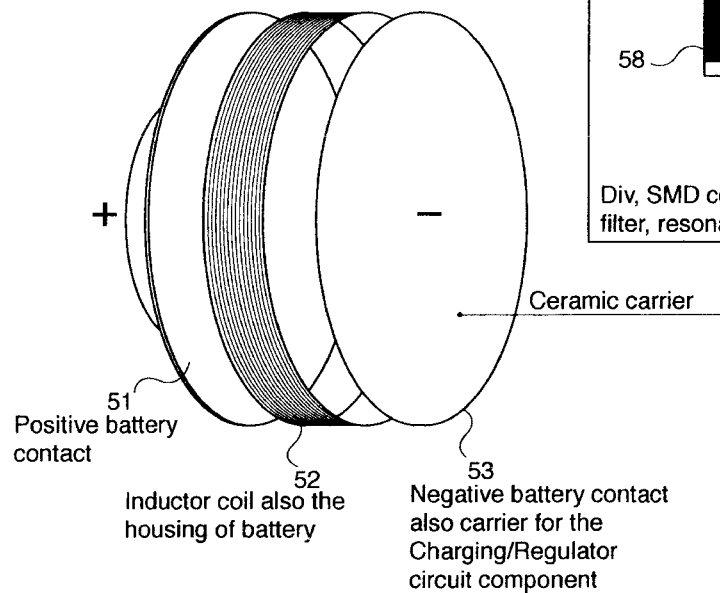
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(57) **ABSTRACT**

A rechargeable battery which may be used with most presently available hearing aids (or other appliances) with no modification to the existing hearing aid is needed in order to use the described wireless charging system. The battery may be known a "Dynamic battery" as the battery is actively charged by means of an inductor circuit built into the battery housing itself or added onto the battery. The hearing aid may simply be placed within the charger housing (or cradle) to charge the battery. No electrical connection by either wires or electrical contacts is needed to recharge the battery, which is located inside the hearing aid housing. Moreover, the battery need not be removed from the hearing aid (or other appliance).

12 Claims, 5 Drawing Sheets



Energy inducing component of battery

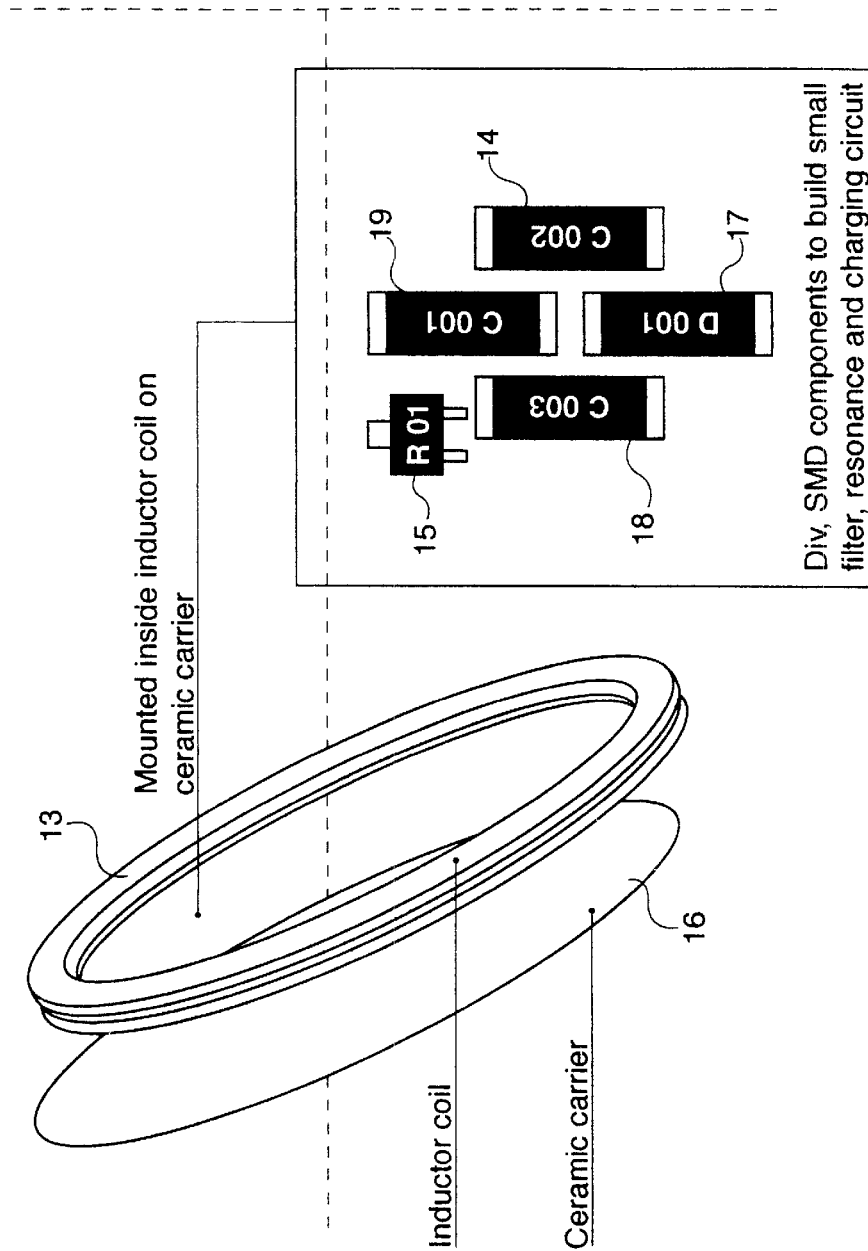


Figure 1

Mounting of battery

At conventional overall size of battery, the inducting circuit takes approx. 25% of the body space

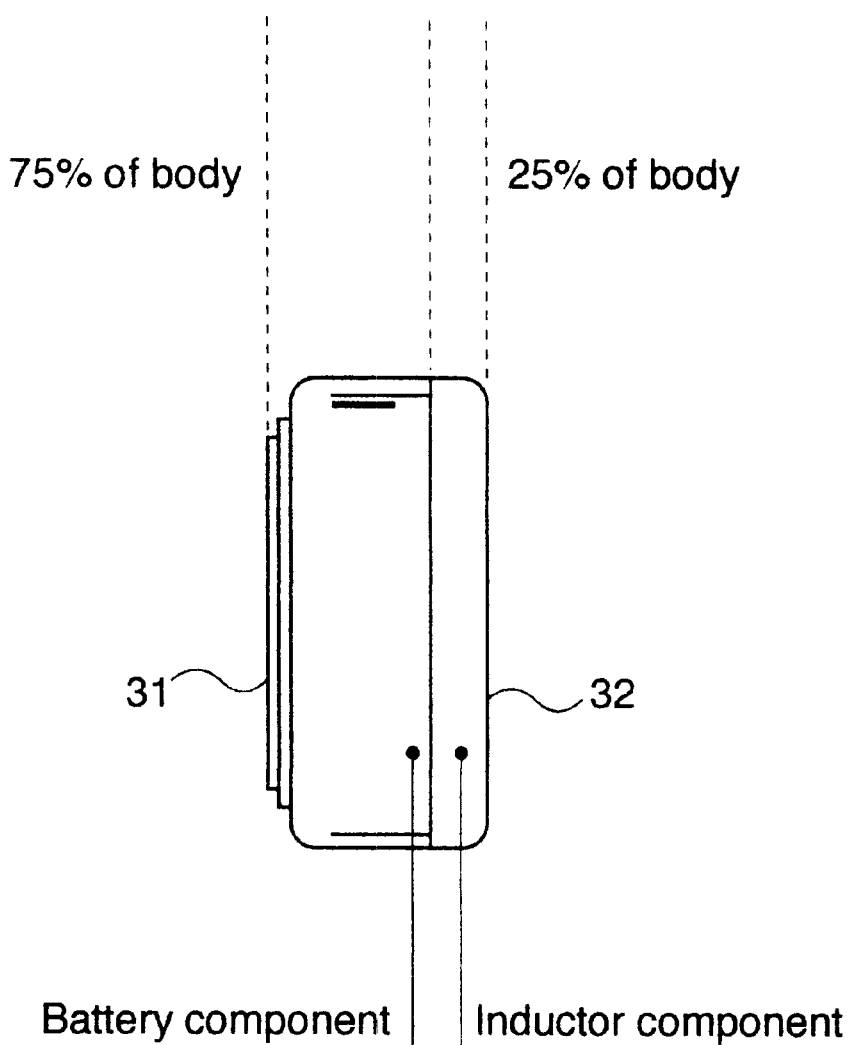


Figure 3

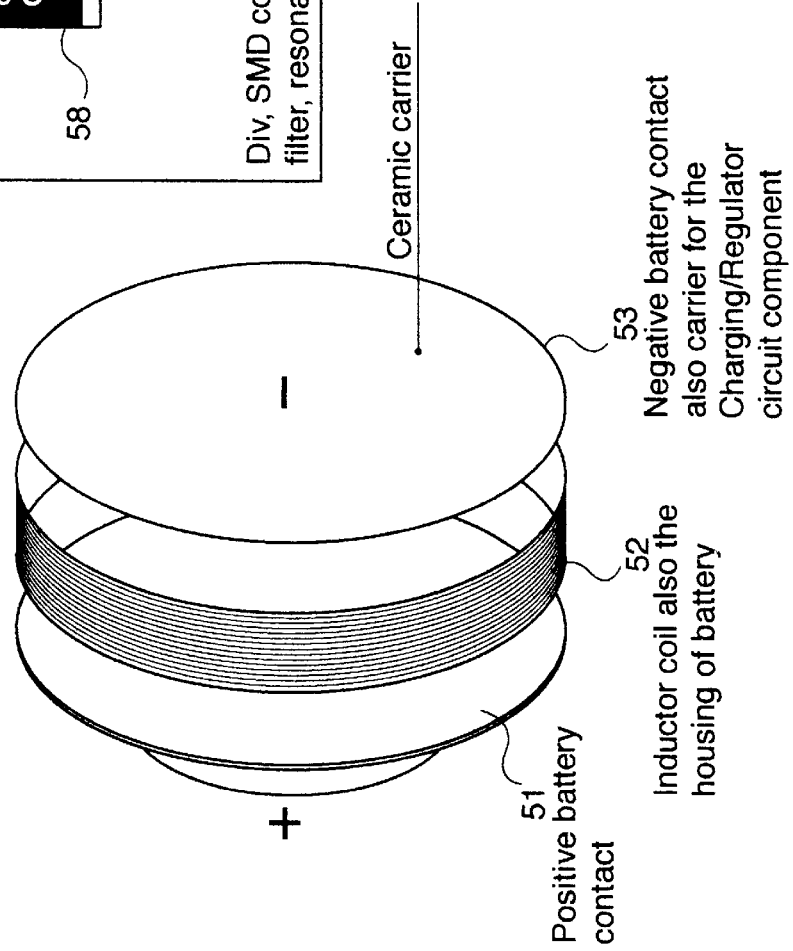
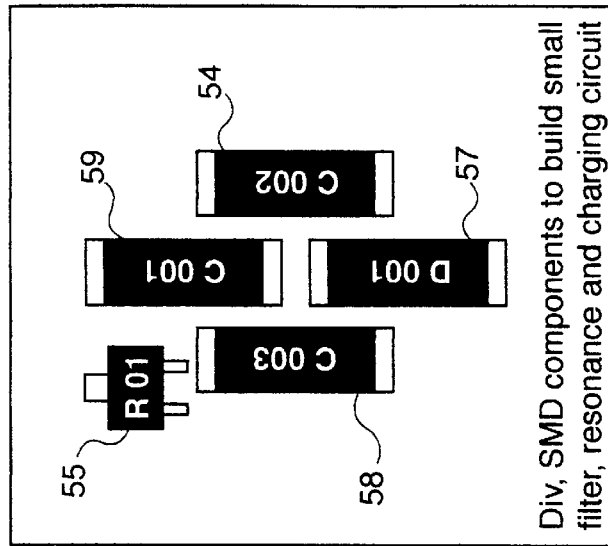


Figure 4

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