

**United States Patent** [19]  
**Reber et al.**

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- [54] **NONINVASIVE APPARATUS HAVING A RETAINING MEMBER TO RETAIN A REMOVABLE BIOSENSOR**
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- [51] **Int. Cl.<sup>6</sup>** ..... **A61B 5/00**
- [52] **U.S. Cl.** ..... **600/322; 600/316; 600/310; 250/341.1**
- [58] **Field of Search** ..... **600/309, 322, 600/346, 347, 572, 573, 578, 314, 316, 575, 583, 584, 562, 310; 604/290, 313; 436/95; 250/341.1; 422/99, 82.05**

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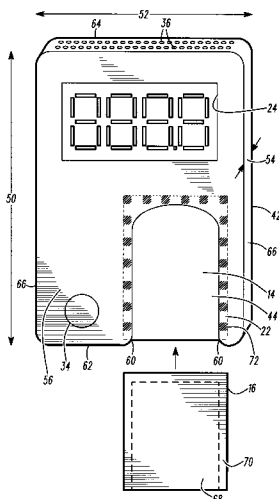
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[57] **ABSTRACT**

In accordance with a first aspect, a noninvasive apparatus comprises a housing (42) having a grasping region (44), and a noninvasive extraction device (10) to noninvasively extract a sample from a hand of an end user at the grasping region (44). In accordance with a second aspect, a noninvasive apparatus comprises a card-shaped housing which supports the noninvasive extraction device 10. In accordance with a third aspect, a retaining member (22) retains a removable biosensor (16) proximate to at least a portion of the noninvasive extraction device (10).

**9 Claims, 5 Drawing Sheets**



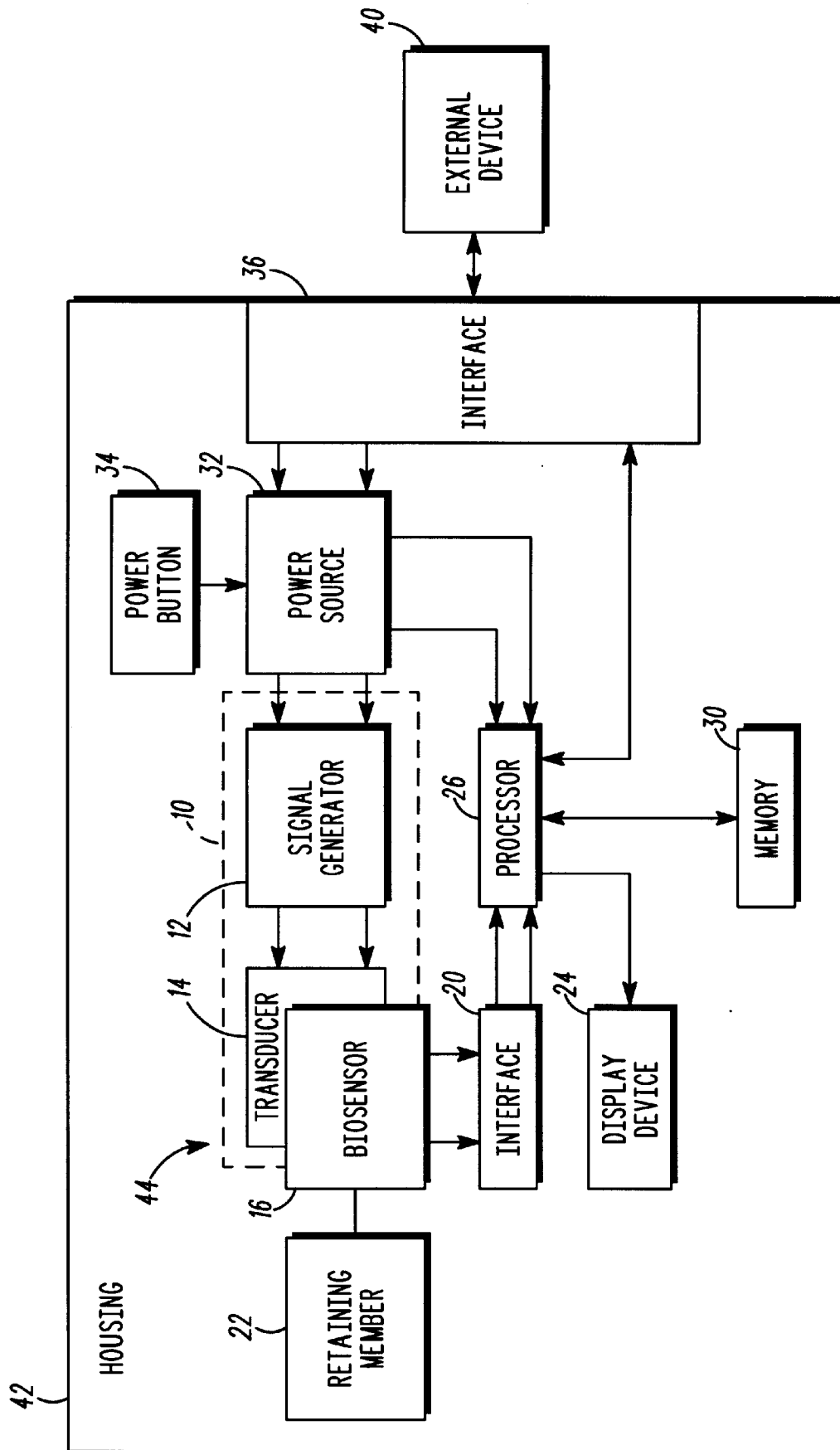
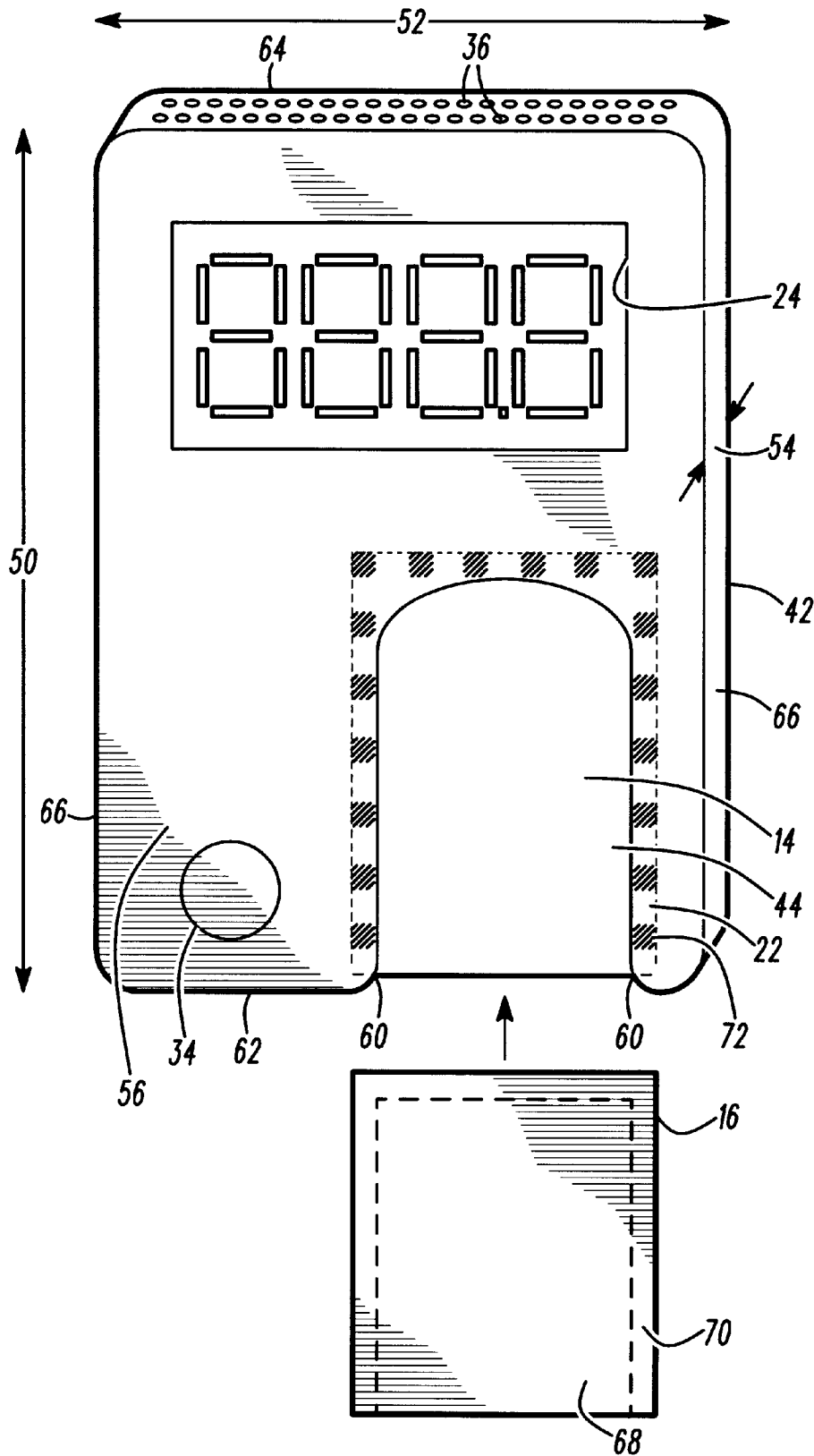


FIG. 1



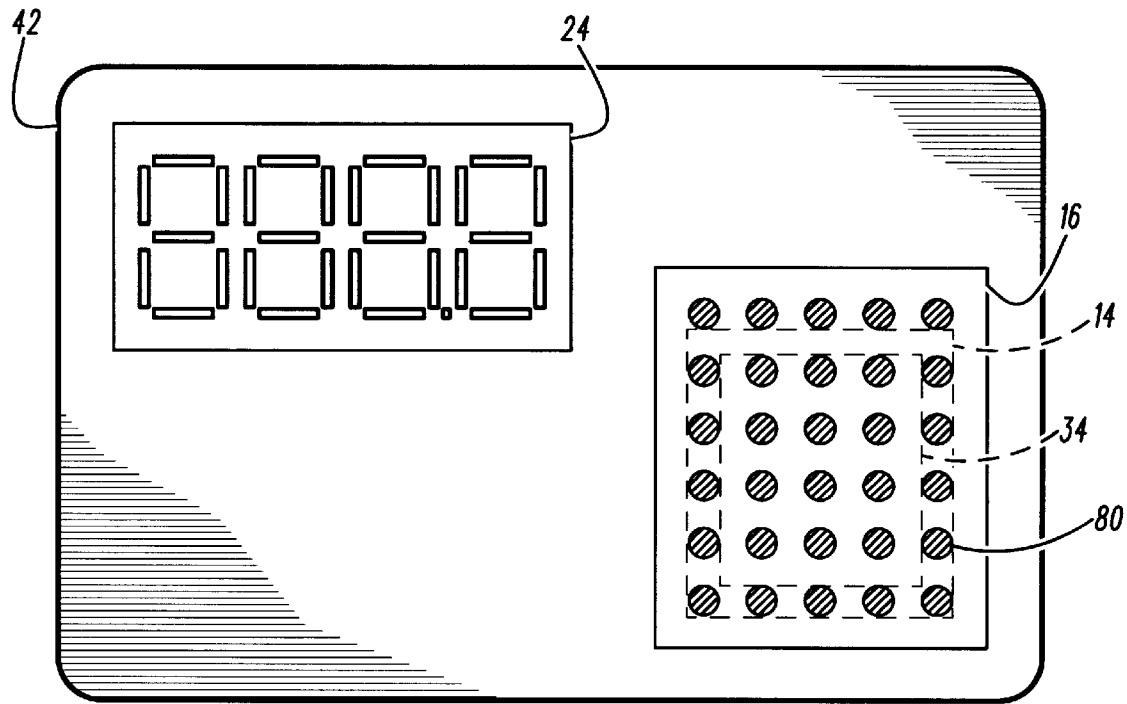


FIG. 3

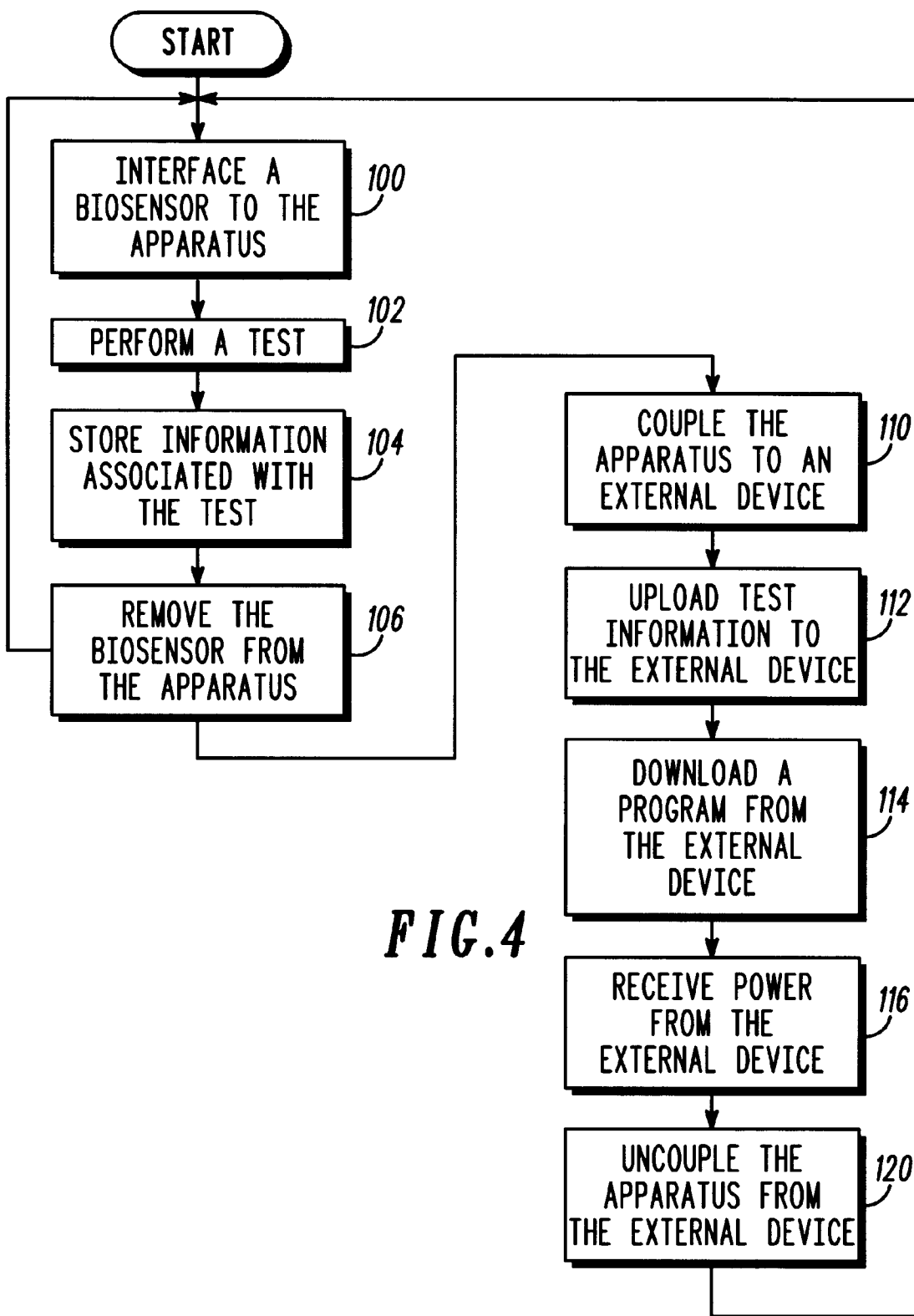


FIG. 4

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