

- [54] **APPARATUS AND METHOD FOR IMPROVING THE PERFORMANCE OF AN AUTOMATIC BLOOD PRESSURE CUFF**
- [75] **Inventor:** Terrance L. Pillsbury, Keizer, Oreg.
- [73] **Assignee:** SpaceLabs Medical, Inc., Redmond, Wash.
- [21] **Appl. No.:** 774,990
- [22] **Filed:** Oct. 15, 1991
- [51] **Int. Cl.<sup>5</sup>** ..... A61B 5/02
- [52] **U.S. Cl.** ..... 128/682; 128/680; 128/681; 128/687; 128/677
- [58] **Field of Search** ..... 128/668, 677-690; 773; 417/313, 440; 606/201-203
- [56] **References Cited**

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*Attorney, Agent, or Firm*—Seed and Berry

[57] **ABSTRACT**

An improved blood pressure measuring device includes a filter intermediate the pressure cuff and the bleed valve to prevent dust, dirt, and other debris from clogging the bleed valve and causing significant damage to the blood pressure measuring device. Further, a data processor assembly is operated in accordance with a method designed to compensate the blood pressure measurement for any resistance added to the pneumatic system as a result of the air filter. The data processor assembly further determines when the filter is clogged thereby indicating that the measurement can no longer be accepted as accurate and the device may be dangerous to the patient.

**U.S. PATENT DOCUMENTS**

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**13 Claims, 4 Drawing Sheets**

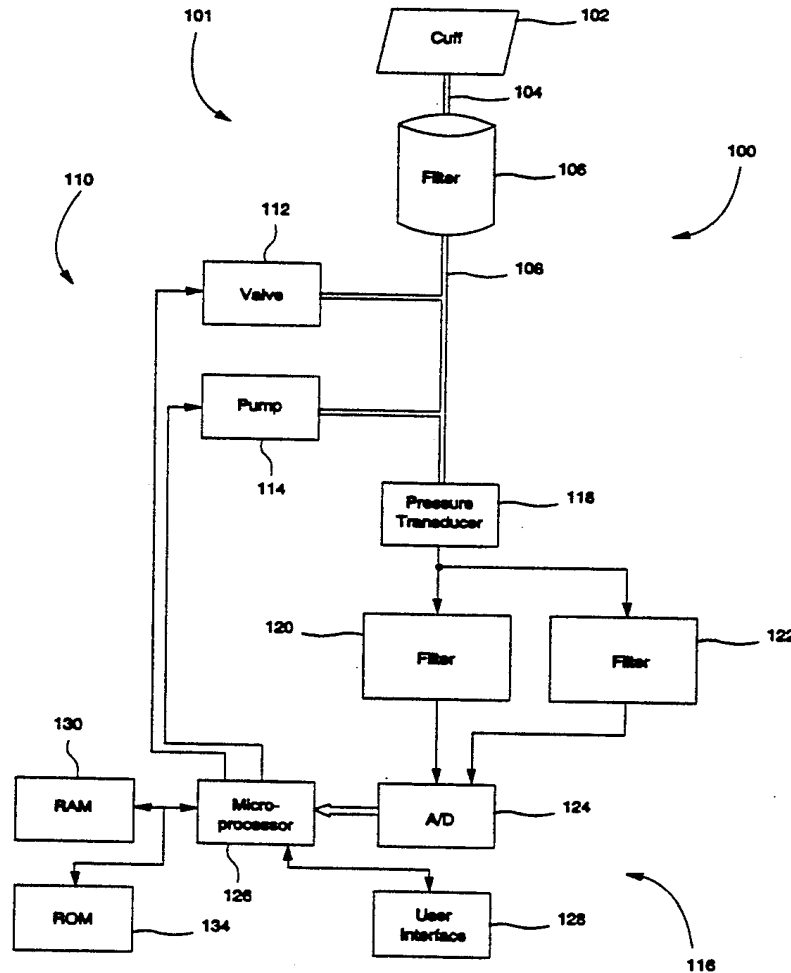


FIGURE 1

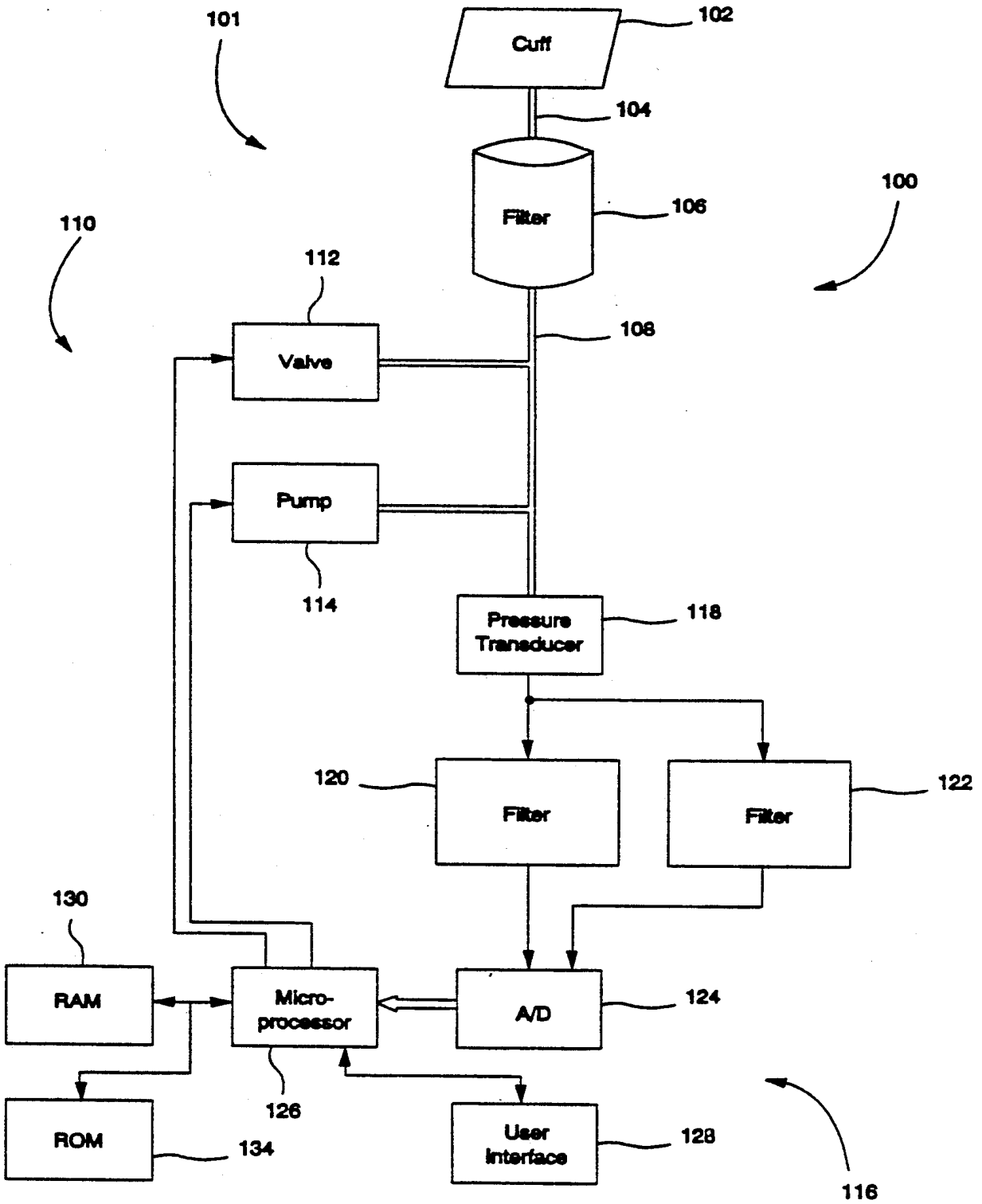


FIGURE 2A

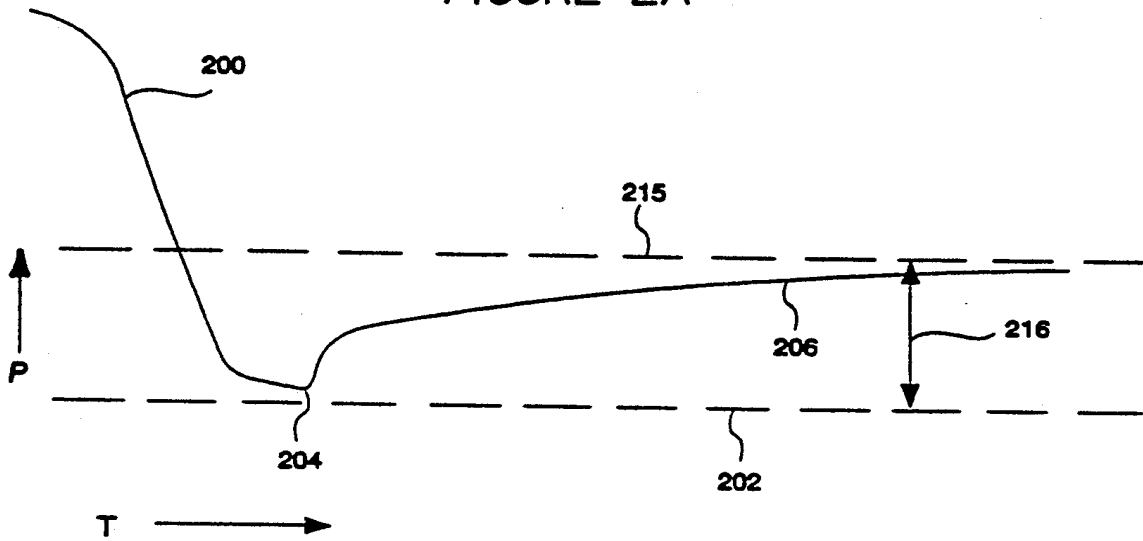


FIGURE 2B

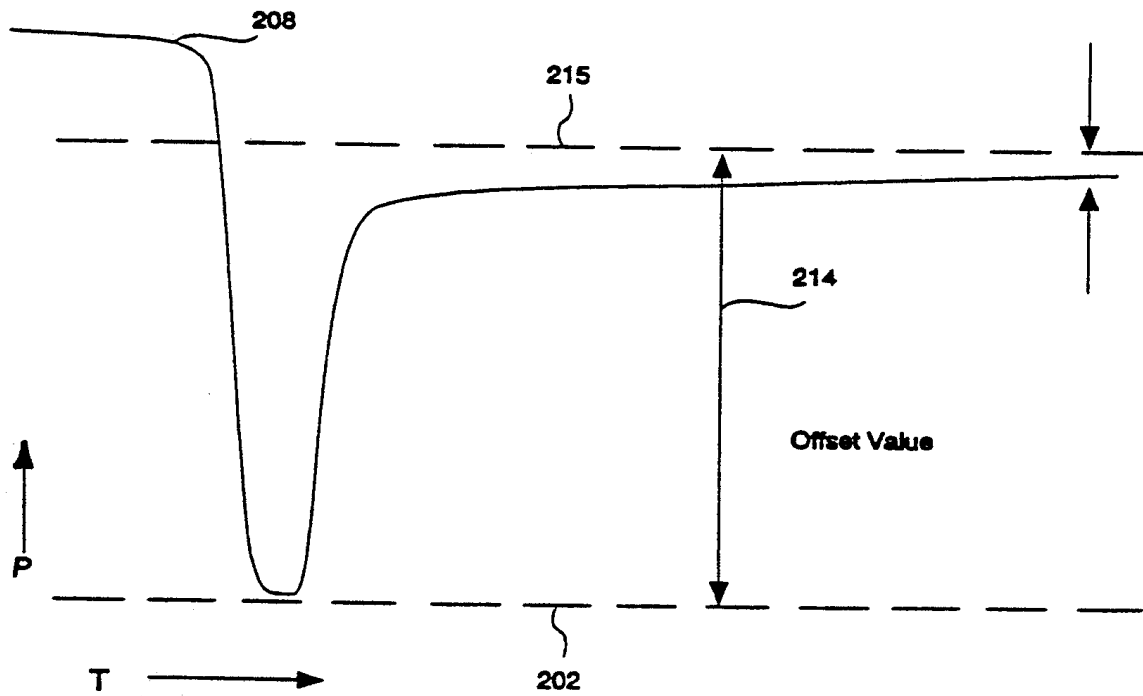
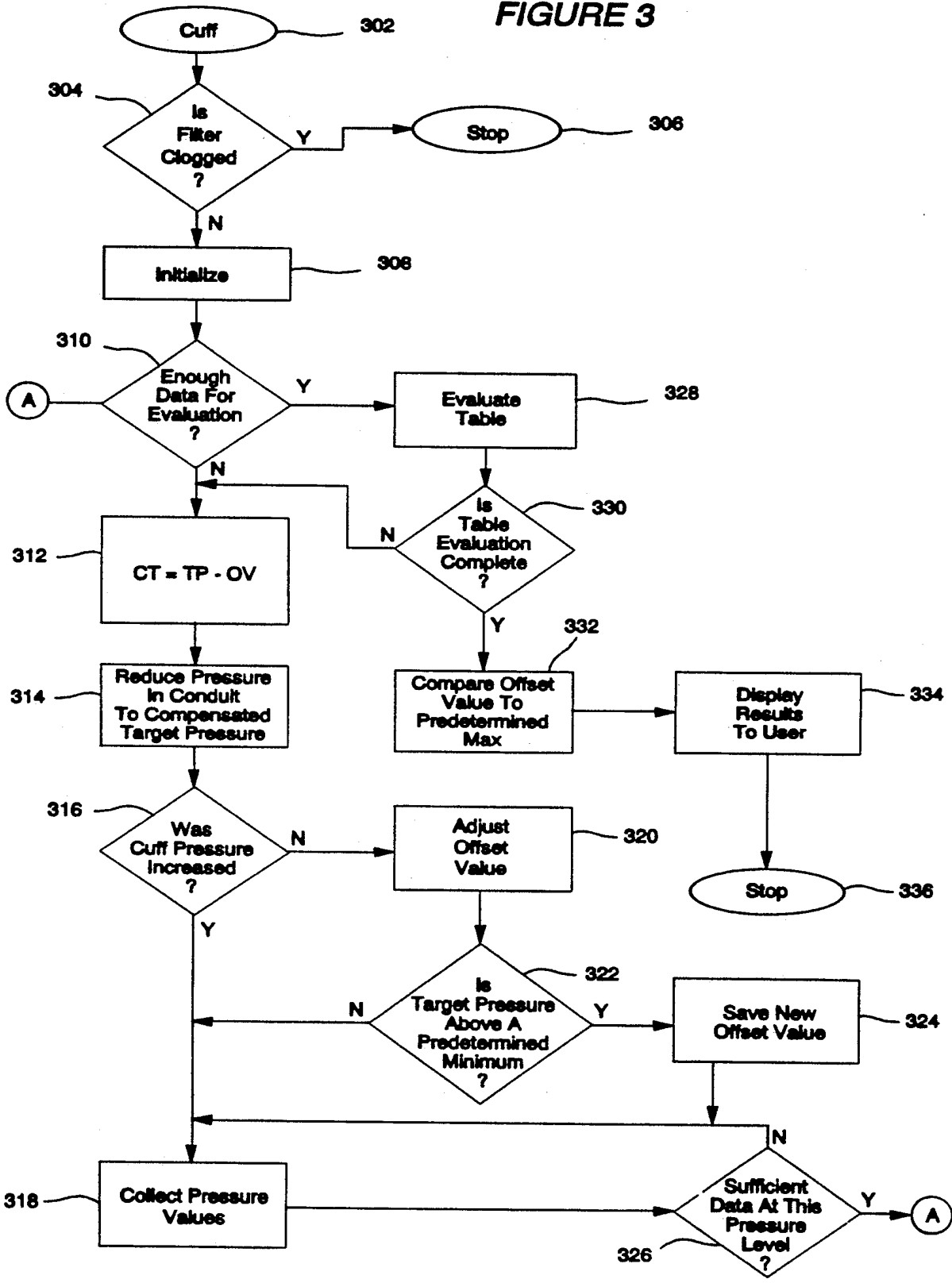


FIGURE 3



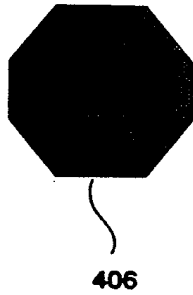


FIGURE 4A

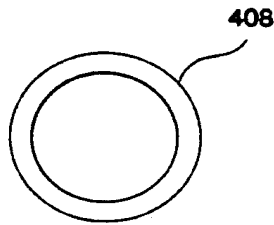


FIGURE 4B

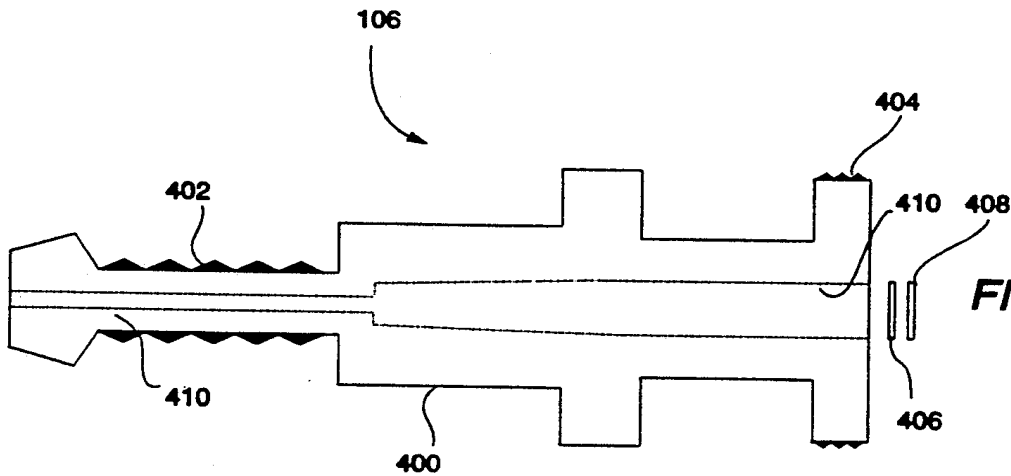


FIGURE 4C

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