US009737154B2

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

(10) **Patent No.: US 9,737,154 B2**
(45) **Date of Patent: *Aug. 22, 2017**

(54) **SYSTEM AND METHOD FOR IMPROVED PRESSURE ADJUSTMENT**

(71) Applicant: **Select Comfort Corporation**, Minneapolis, MN (US)

(72) Inventors: **Paul James Mahoney**, Stillwater, MN (US); **Matthew Glen Hilden**, Robbinsdale, MN (US); **Matthew Wayne Tilstra**, Rogers, MN (US)

(73) Assignee: **Select Comfort Corporation**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 16 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/283,675**

(22) Filed: **May 21, 2014**

(65) **Prior Publication Data**

US 2015/0374137 A1 Dec. 31, 2015

Related U.S. Application Data

(63) Continuation of application No. 12/936,084, filed as application No. PCT/US2008/059409 on Apr. 4, 2008, now Pat. No. 8,769,747.

(51) **Int. Cl.**
A47C 27/08 (2006.01)
A47C 27/10 (2006.01)
A47C 17/80 (2006.01)

(52) **U.S. Cl.**
CPC ***A47C 27/083*** (2013.01); ***A47C 17/80*** (2013.01); ***A47C 27/082*** (2013.01); *A47C 27/10* (2013.01)

(58) **Field of Classification Search**
CPC A47C 27/08; A47C 27/081; A47C 27/082; A47C 27/083; A47C 27/10;
(Continued)

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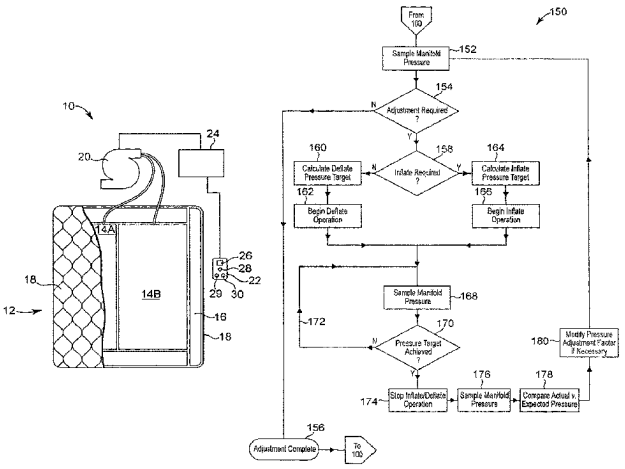
Primary Examiner — Robert G Santos
(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

(57) **ABSTRACT**

A method for adjusting pressure within an air bed comprises providing an air bed that includes an air chamber and a pump having a pump housing, selecting a desired pressure setpoint for the air chamber, calculating a pressure target, adjusting pressure within the air chamber until a pressure within the pump housing is substantially equal to the pressure target, determining an actual chamber pressure within the air chamber, and comparing the actual chamber pressure to the desired pressure setpoint to determine an adjustment factor error. The pressure target may be calculated based upon the desired pressure setpoint and a pressure adjustment factor. Furthermore, the pressure adjustment factor may be modified based upon the adjustment factor error determined by comparing the actual chamber pressure to the desired pressure setpoint.

22 Claims, 8 Drawing Sheets



(58) **Field of Classification Search**
CPC A61G 7/05769; A61G 7/05776; Y10T 137/3584; Y10T 137/36; G05B 15/02
USPC 5/706, 710, 713, 714, 644, 654, 655.3; 137/224, 223; 700/17
See application file for complete search history.

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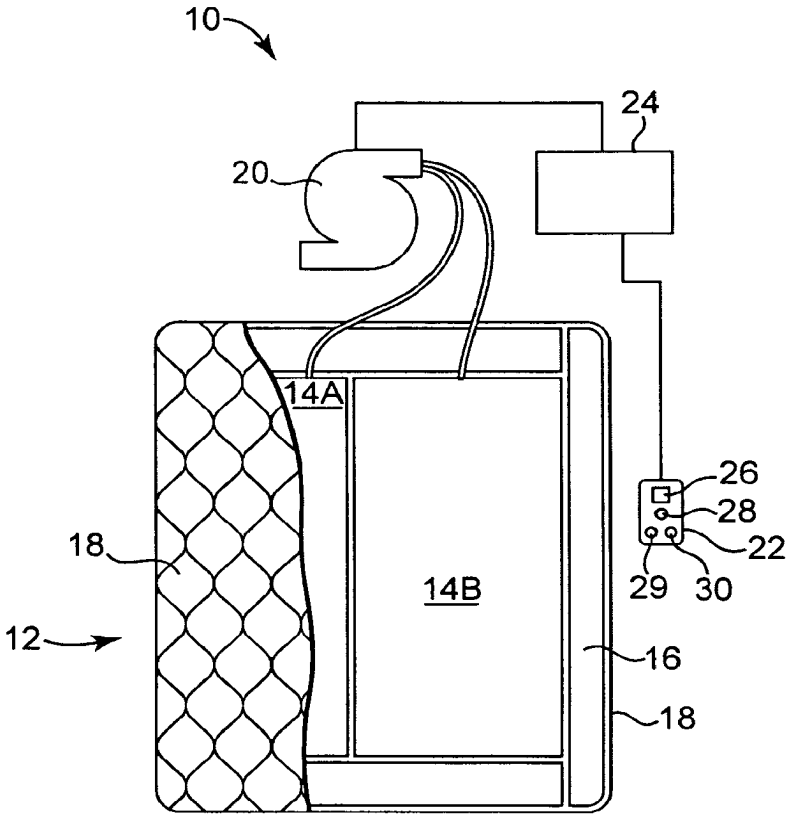

Fig. 1

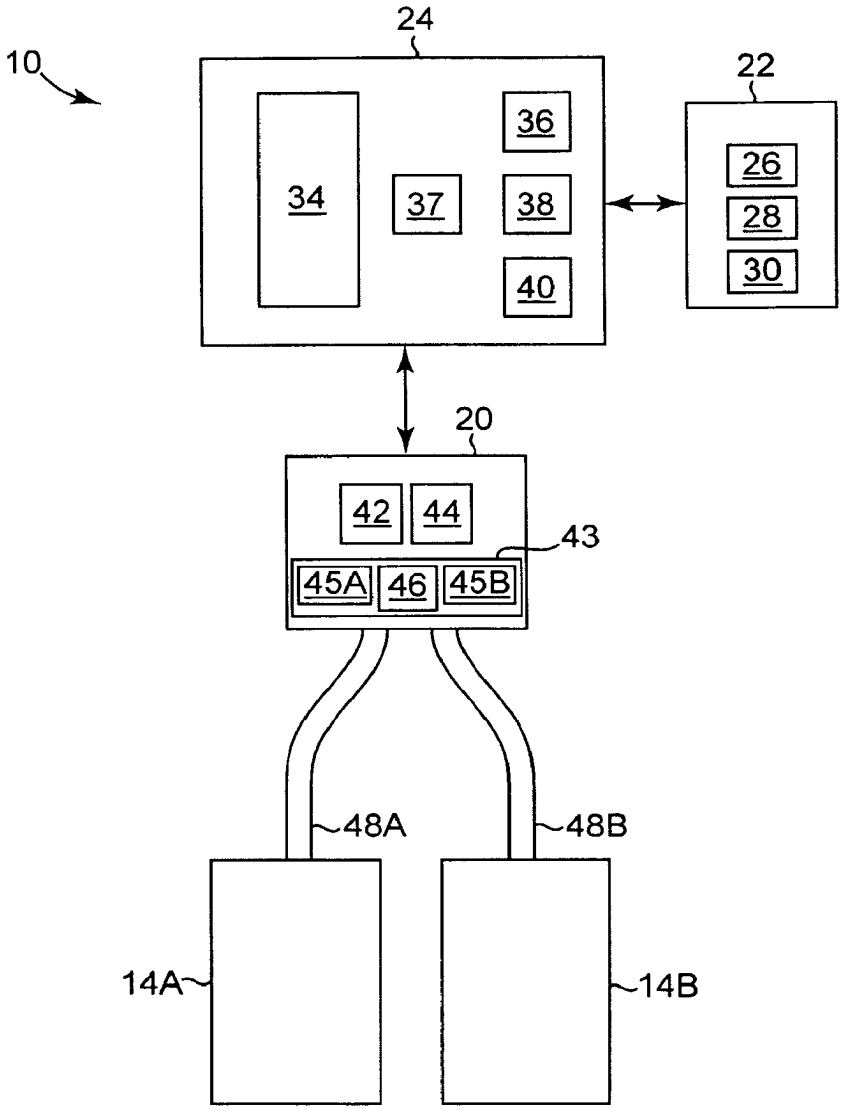

Fig. 2

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