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(54) **METHOD AND SYSTEM FOR ROBOT LOCALIZATION AND CONFINEMENT**

(75) Inventors: **Joseph L. Jones**, Acton, MA (US); **Philip R. Mass**, Denver, CO (US)

(73) Assignee: **IRobot Corporation**, Burlington, MA (US)

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(58) **Field of Search** 318/567, 568.16, 318/580, 587, 568.12; 15/319, 339; 701/22, 23, 200, 210, 300, 301, 28; 901/1, 46, 47; 180/167–169

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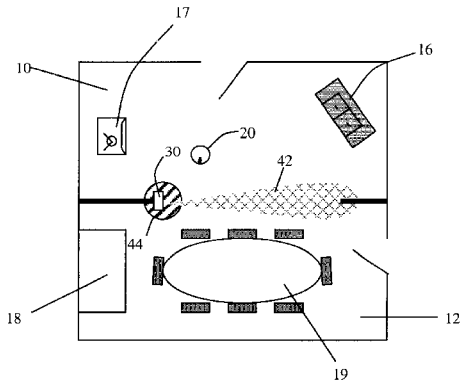
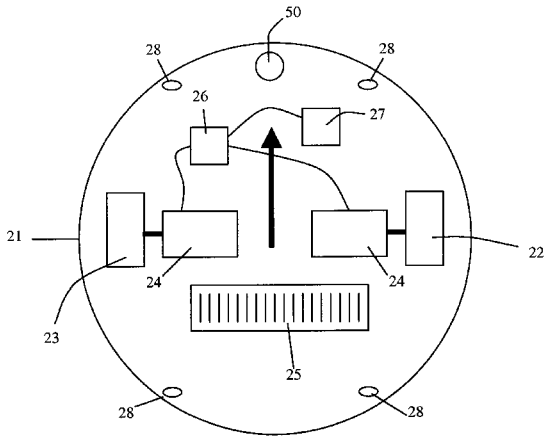
Primary Examiner—Robert Nappi
Assistant Examiner—Patrick Miller
(74) *Attorney, Agent, or Firm*—Glen D. Weinstein, Esq.; Lucash, Gesmer & Updegrove, LLP

(57) **ABSTRACT**

The present invention discloses a system and method for confining a robot to a particular space. The system includes a portable barrier signal transmitter that produces a barrier signal primarily along an axis, and a mobile robot capable of avoiding the barrier signal upon detection of the barrier signal. In the preferred embodiment the barrier signal is emitted in an infrared frequency and the robot includes an omni-directional signal detector. Upon detection of the signal, the robot turns in a direction selected by a barrier avoidance algorithm until the barrier signal is no longer detected.

19 Claims, 12 Drawing Sheets