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**Wang et al.**

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(54) **EXPANDABLE RING DEVICE**

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(52) **U.S. Cl.**

CPC ..... **G06F 1/163** (2013.01); **G06F 3/014** (2013.01); **G06F 3/016** (2013.01); **G06F 3/044** (2013.01); **G06F 2203/0331** (2013.01)

(58) **Field of Classification Search**

CPC combination set(s) only.  
See application file for complete search history.

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(57) **ABSTRACT**

A system may include ring devices. A ring device may have a housing that is configured to be worn on a finger of a user. Sensors such as force sensors, ultrasonic sensors, inertial measurement units, optical sensors, touch sensors, and other components may be used in gathering input from a user. Control circuitry may wirelessly transmit information gathered from sensors and other input devices to an associated electronic device. The information may be used in controlling operation of the electronic device. The housing of the ring device may have an annular main body and an expandable portion coupled to the main body. The expandable portion may include a flap with a hinge, a rotatable housing member, a housing with an internal adjustable frame and a cover, an expandable housing formed from an expandable tube coupled between first and second annular devices, and other expandable structures.

**27 Claims, 20 Drawing Sheets**

