US008929085B2

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

(10) **Patent No.: US 8,929,085 B2**
(45) **Date of Patent: Jan. 6, 2015**

(54) **FLEXIBLE ELECTRONIC DEVICES**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 323 days.

(21) Appl. No.: **13/250,227**

(22) Filed: **Sep. 30, 2011**

(65) **Prior Publication Data**

US 2013/0083496 A1 Apr. 4, 2013

(51) **Int. Cl.**
H05K 1/00 (2006.01)

(52) **U.S. Cl.**
USPC **361/749**

(58) **Field of Classification Search**
USPC 361/749
See application file for complete search history.

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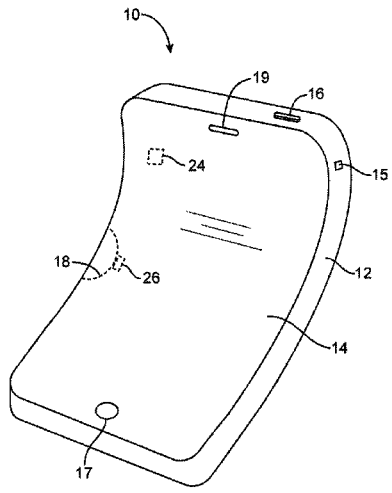
(57) **ABSTRACT**

Flexible electronic devices may be provided. A flexible electronic device may include a flexible display, a flexible housing and one or more flexible internal components configured to allow the flexible electronic device to be deformed. Flexible displays may include flexible display layers, flexible touch-sensitive layers, and flexible display cover layers. The flexible housing may be a multi-stable flexible housing having one or more stable positions. The flexible housing may include a configurable support structure that, when engaged, provides a rigid support structure for the flexible housing. The flexible internal components may include flexible batteries, flexible printed circuits or other flexible components. A flexible battery may include flexible and rigid portions or may include a lubricious separator layer that provides flexibility for the flexible battery. A flexible printed circuit may include flexible and rigid portions or openings that allow some rigid portions to flex with respect to other rigid portions.

22 Claims, 25 Drawing Sheets