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(12) **United States Patent**  
**Philipp**

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- (54) **CAPACITIVE POSITION SENSOR**
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- (73) Assignee: **Atmel Corporation**, San Jose, CA (US)
- (\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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- (65) **Prior Publication Data**  
US 2011/0227589 A1 Sep. 22, 2011

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**Related U.S. Application Data**

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- (63) Continuation of application No. 12/703,614, filed on Feb. 10, 2010, now Pat. No. 7,952,367, which is a continuation of application No. 11/868,566, filed on Oct. 8, 2007, now abandoned.

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- (60) Provisional application No. 60/862,358, filed on Oct. 20, 2006.

(57) **ABSTRACT**

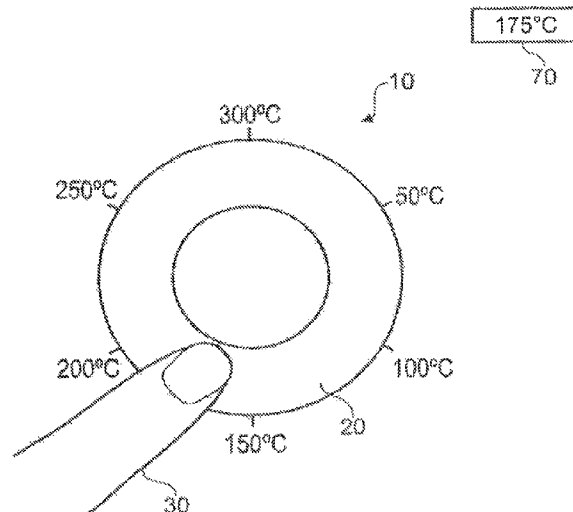
- (51) **Int. Cl.**  
**G01R 27/26** (2006.01)
- (52) **U.S. Cl.**  
USPC ..... **324/686**; 324/667
- (58) **Field of Classification Search** ..... 324/667,  
324/676-690  
See application file for complete search history.

In one embodiment, a method includes receiving one or more first signals indicating one or more first capacitive couplings of an object with a sensing element that comprises a sensing path that comprises a length. The first capacitive couplings correspond to the object coming into proximity with the sensing element at a first position along the sensing path of the sensing element. The method includes determining based on one or more of the first signals the first position of the object along the sensing path and setting a parameter to an initial value based on the first position of the object along the sensing path. The initial value includes a particular parameter value and is associated with a range of parameter values. The range of parameter values is associated with the length of the sensing path.

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**19 Claims, 4 Drawing Sheets**

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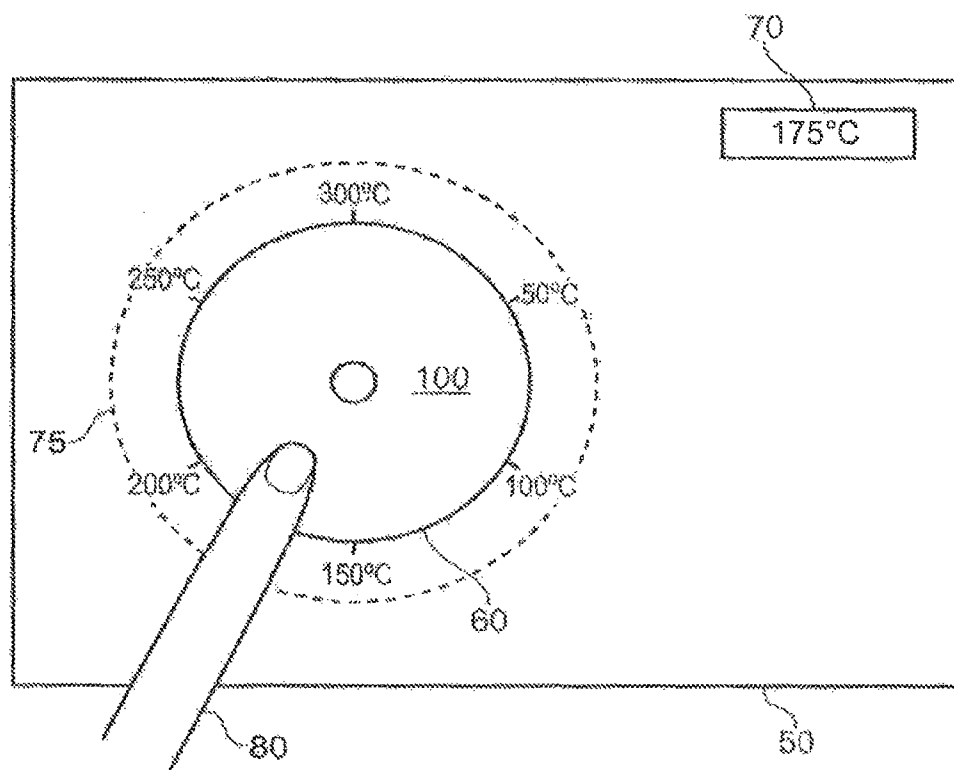


FIG. 1

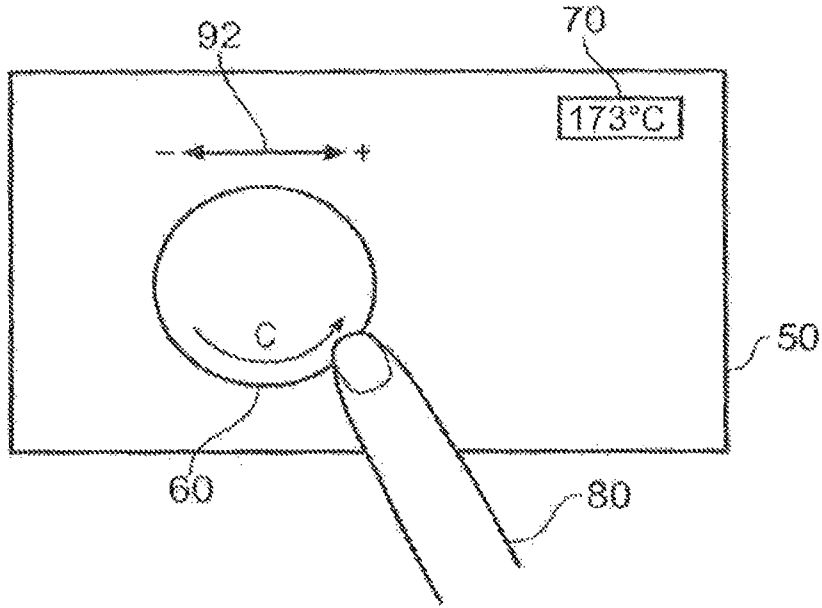


FIG. 2A

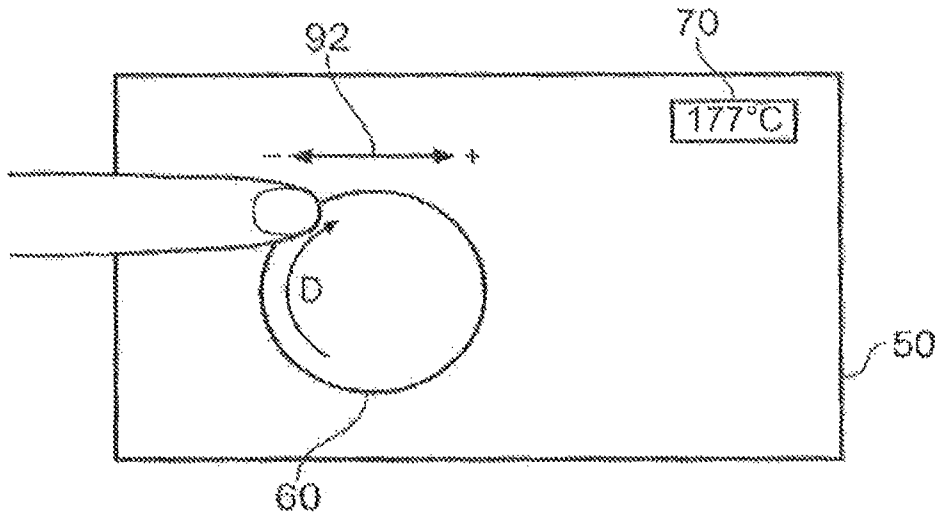


FIG. 2B

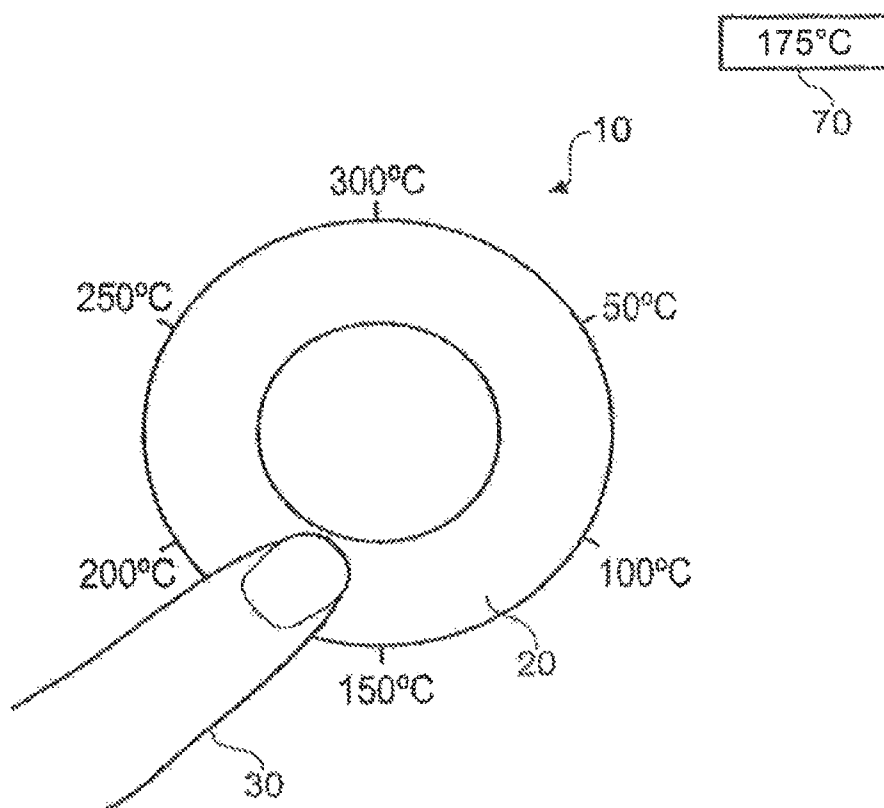


FIG. 3

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