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(12) **United States Patent Hopkins**

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(54) **ULTRASOUND PROBE WITH ACCELEROMETER**

(2013.01); *A61B 2562/0219* (2013.01); *G01P 7/00* (2013.01); *G01S 15/8936* (2013.01)

(76) Inventor: **Andrew David Hopkins**, Sutton Coldfield (GB)

(58) **Field of Classification Search**  
USPC ..... **702/56**; 600/300; 600/101  
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See application file for complete search history.

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 318 days.

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(2), (4) Date: **Sep. 15, 2011**

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The International Search Report dated Jun. 23, 2010.

**Related U.S. Application Data**

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*Assistant Examiner* — Alvaro Fortich

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(57) **ABSTRACT**

(51) **Int. Cl.**

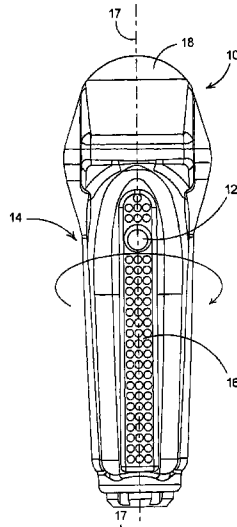
<i>G01F 17/00</i>	(2006.01)
<i>A61B 8/00</i>	(2006.01)
<i>A61B 8/08</i>	(2006.01)
<i>A61B 8/12</i>	(2006.01)
<i>G10K 11/35</i>	(2006.01)
<i>G01P 7/00</i>	(2006.01)
<i>G01S 15/89</i>	(2006.01)

An ultrasonic probe (10) that scans a subject with beams of high frequency sound. The probe (10) includes a transducer (26) to produce high frequency sound waves, a means to steer the sound waves in the proper direction, a printed circuit board (22) with a non-volatile memory (38), a micro electrico-mechanical accelerometer integrated circuit (32) and an outlet connector (19). The accelerometer (32) is configured to detect the movement of the probe (10) in from two to three axes when the probe (10) is rotated or moved in a linear direction to allow the probe (10) to detect images from more than one plane.

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

CPC ..... *A61B 8/12* (2013.01); *A61B 8/4254* (2013.01); *A61B 8/483* (2013.01); *G10K 11/35*

**20 Claims, 8 Drawing Sheets**



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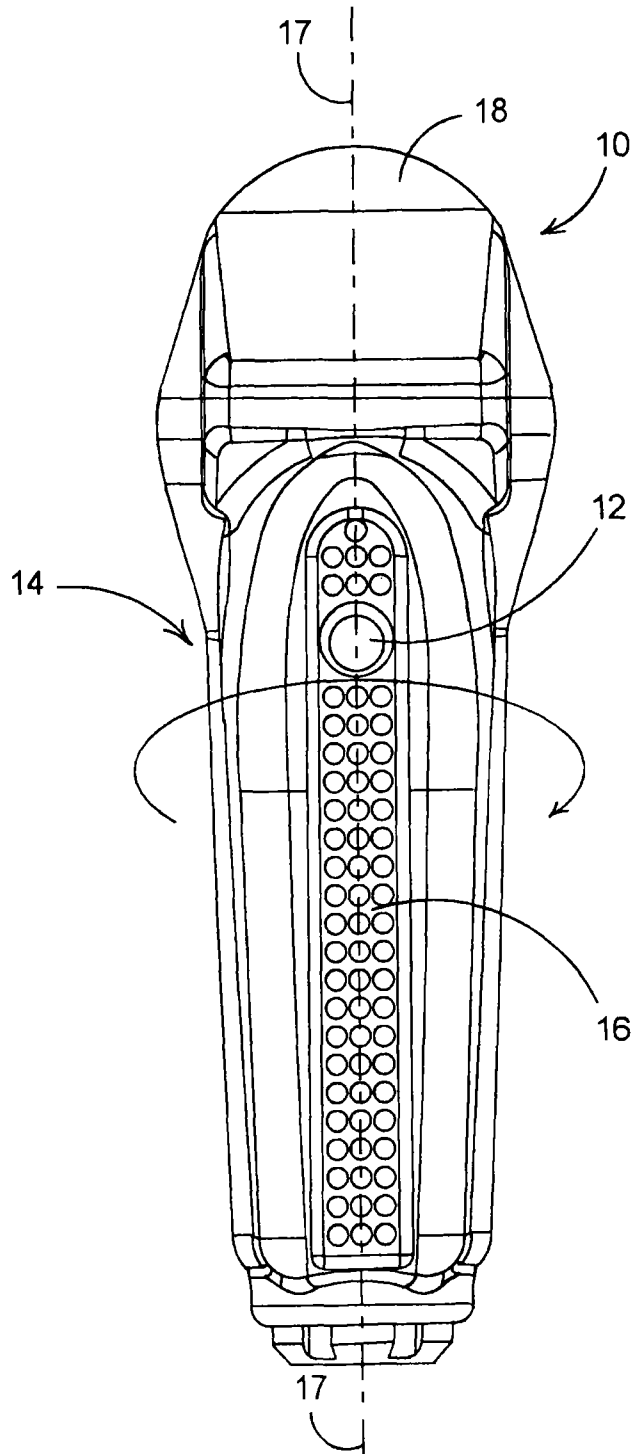


FIGURE 1

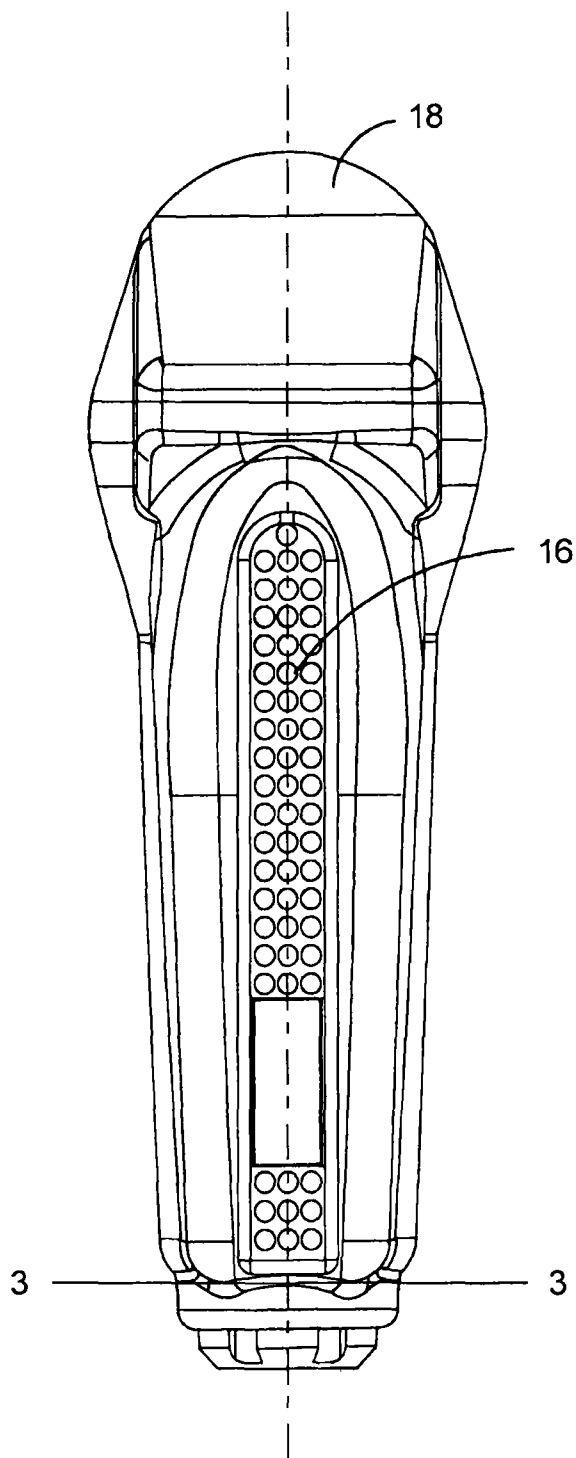


FIGURE 2

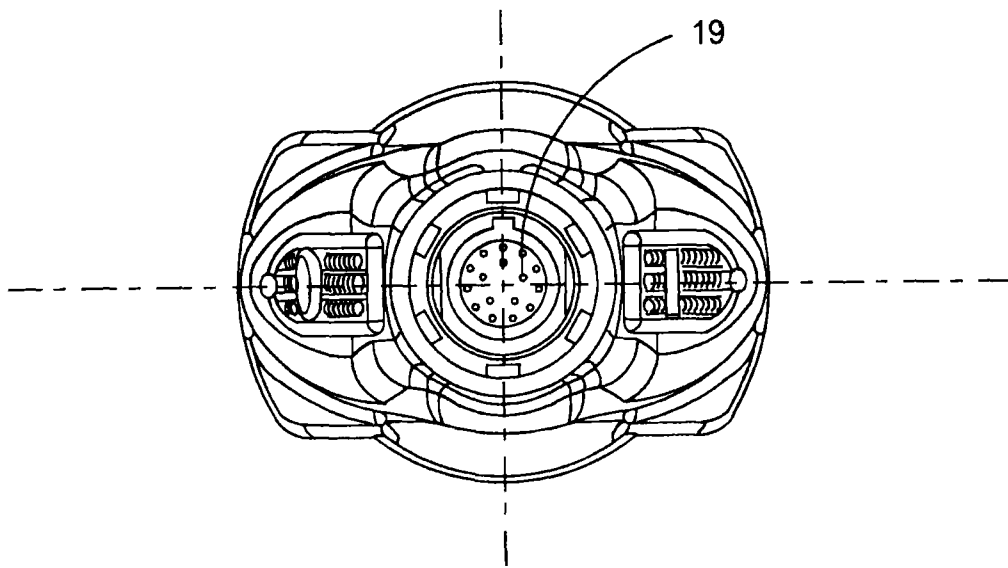


FIGURE 3

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