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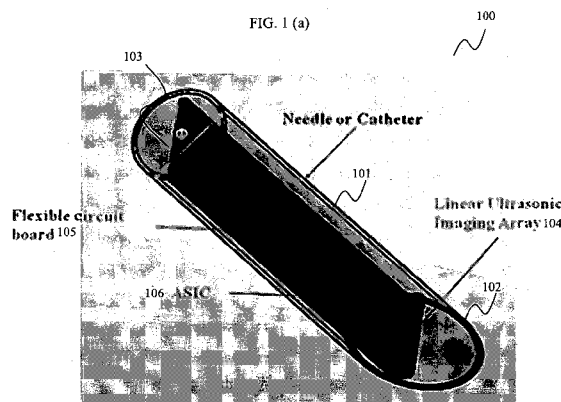
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(54) Title: TISSUE PENETRATION DEVICE COUPLED WITH ULTRASOUND SCANNER



(57) Abstract: Embodiments provide a device for penetrating a tissue of a subject. The device comprises a tissue penetrating portion having a tissue penetrating end. The device further comprises an ultrasonic scanner coupled to the tissue penetrating portion. The ultrasonic scanner comprises an ultrasound transduction circuit being configured to generate and transmit ultrasound waves to the subject and to receive returned sound waves echoed from the subject. The ultrasonic scanner further comprises a pulse generating circuit being configured to generate an electrical pulse so that the ultrasound transduction circuit is triggered to generate and transmit ultrasound waves.