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(54) Title: NEEDLE ASSEMBLY INCLUDING AN ALIGNED MAGNETIC ELEMENT

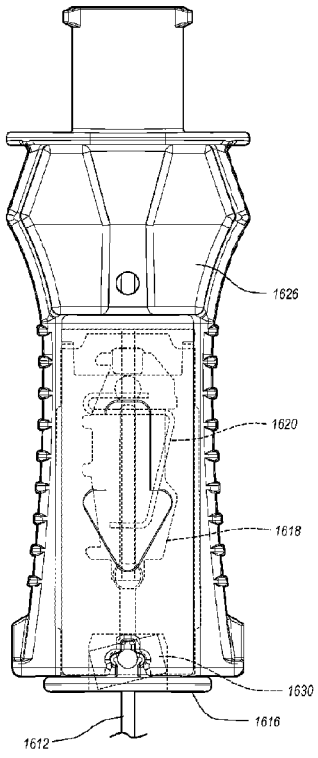


FIG. 41C

(57) Abstract: A guidance system for assisting with the insertion of a needle into a patient body is disclosed. The guidance system utilizes ultrasound imaging or other suitable imaging technology. In one embodiment, the guidance system comprises an imaging device including a probe for producing an image of an internal body portion target, such as a vessel. One or more sensors are included with the probe. The sensors sense a detectable characteristic related to the needle, such as a magnetic field of a magnet included with the needle. The system includes a processor that uses data relating to the sensed characteristic to determine a 3-D position of the needle. The system includes a display for depicting the position of the needle. A needle assembly including a hub, cannula, and magnetic element is also disclosed, wherein a magnetic axis of the magnetic element is configured to be coaxially aligned with the needle cannula.

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