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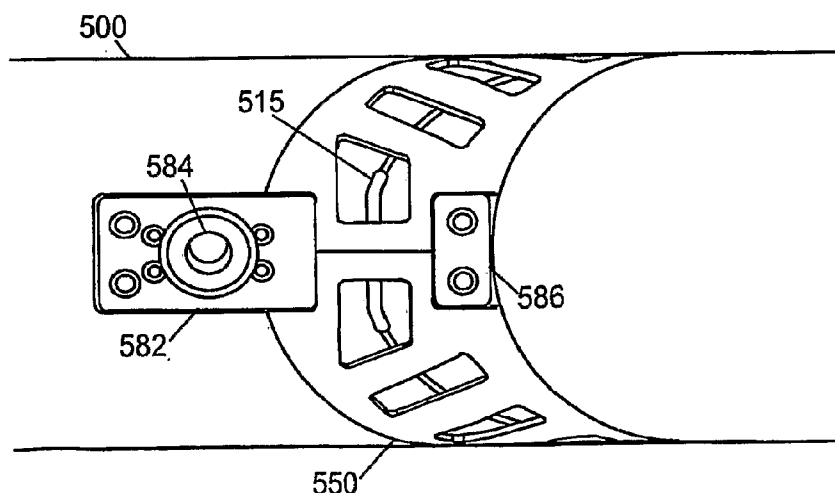
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR BUILDING A TILTED ANTENNA



(57) Abstract: Logging tools having protected tilted antennas are disclosed, along with construction methods therefor. In one method embodiment, a tilted antenna on a retrievable segment of a downhole tool is constructed by: forming an elliptical recess on the segment; forming an antenna within the elliptical recess; and forming an elliptical pattern of windows over and perpendicular to the axis of the elliptical antenna. Some tool embodiments comprise a retrievable segment of a downhole tool having an elliptical recess; an elliptical antenna disposed within the elliptical recess; and an elliptical pattern of windows formed over an perpendicular to the plane of the elliptical antenna.

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