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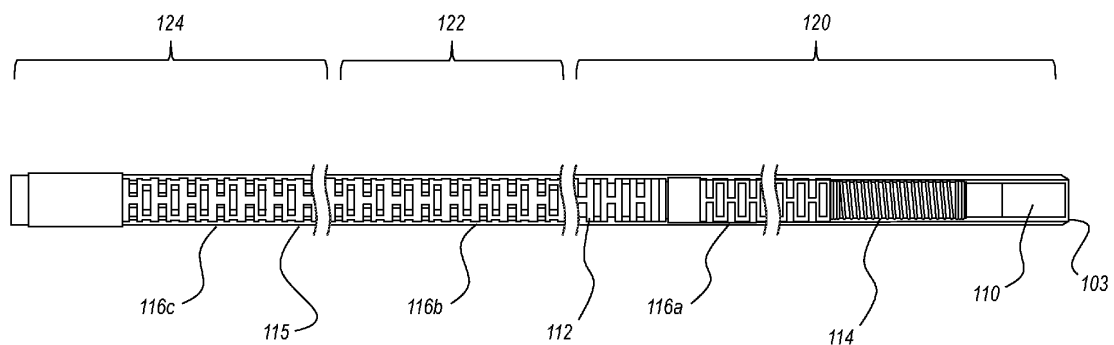


FIG. 2

(57) Abstract: Disclosed are microcatheter devices with features that provide effective axial response, good distribution of bending forces, and a smooth bending stiffness profile that minimizes abrupt changes in stiffness. A catheter device includes a microfabricated inner shaft having a plurality of gaps, and an outer member comprising a polymer material disposed within the gaps. The catheter device provides non-linear bending stiffness such that bending becomes more difficult as the bend angle increases.

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