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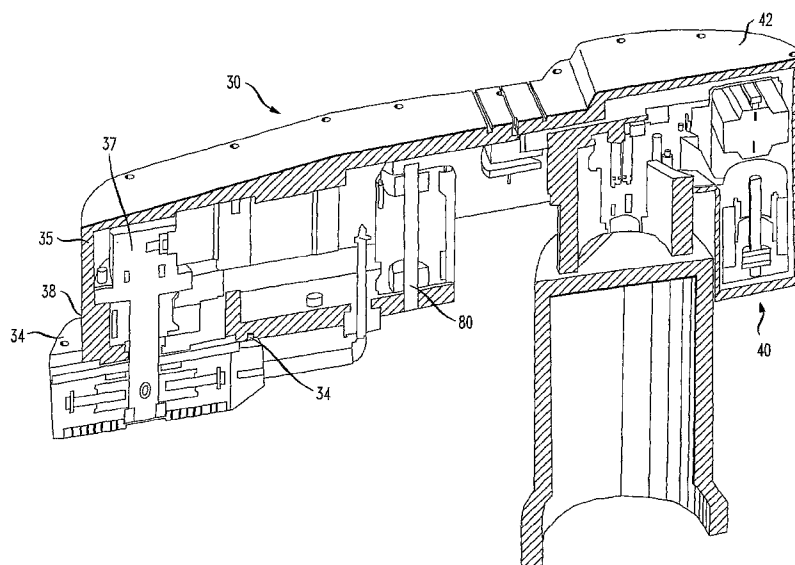
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(54) Title: ENHANCED END EFFECTOR ARM ARRANGEMENT FOR CMP PAD CONDITIONING



(57) Abstract: A CMP conditioning apparatus enhanced end effector arm for improving the reliability of the apparatus and the quality of the conditioning and polishing operations includes a conditioner head with features that provide for simplified alignment/attachment of a conditioning disk to the arm, while also providing a "quick release" mechanism for maintenance operations. The enhanced arm also includes an improved actuator that provides for a static friction ("stiction")-free movement of the arm and better control of the downforce applied by the conditioning disk to the polishing pad. A dual-drive pulley system is used within the enhanced end effector arm to minimize the tilting of the drive belts within the effector arm as the arm pivots to follow the contour of an "aging" polishing pad.

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