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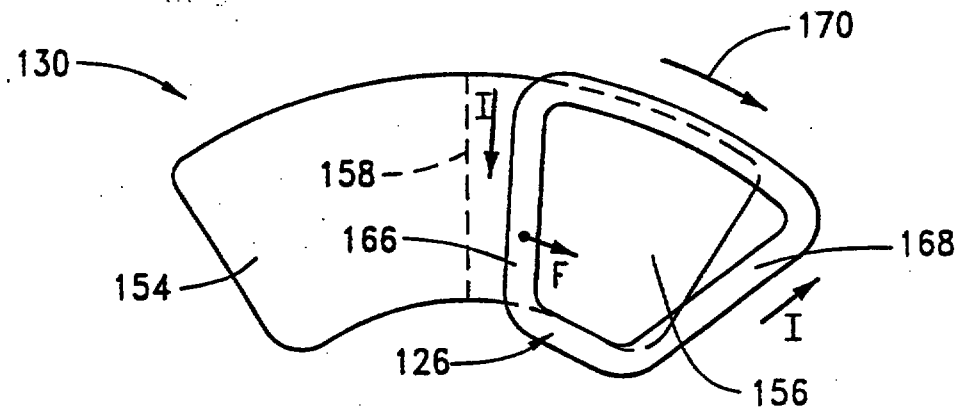
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(54) Title: EXTENDING ACTUATOR RANGE THROUGH MAGNETIC FLUX REVERSAL DETECTION

(57) Abstract

Apparatus and method for increasing sweep angle of a rotary actuator (110) in a disc drive (100). The actuator (110) supports a head (118) adjacent a surface of a disc (108) and an actuator coil (126) adjacent a permanent magnet assembly (130). The actuator coil (126) has first and second active lengths (166, 168) which magnetically interact with adjacent first and second magnet portions (154, 156) of the permanent magnet assembly (130), with the permanent magnet assembly (130) generating a magnetic flux reversal at a transition zone (158) between the first and second magnet portions (154, 156). The head (118) is moved by applying current in a first direction to move the actuator coil (126) in a selected coil direction, thereby causing a selected one of the first and second active lengths (166, 168) to cross the transition zone (158). The polarity of the current is then reversed so that the current is applied in a second direction opposite the first direction, which causes the actuator coil (126) to continue to move in the selected coil direction.



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