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A B S T R A C T

ROTARY HEAD ACTUATOR FOR A MAGNETIC DISK DRIVE DATA STORAGE DEVICE

The present invention provides a rotary actuator for use in a disk drive having a stationary frame, a magnetic disk mounted with respect to the frame for rotation relative to the frame and a magnetic transducing head for storing data onto the disk and retrieving data previously stored on the disk, the rotary actuator serving for controllably positioning the head with respect to the disk.

The rotary actuator in accordance with the invention comprises a stationary portion (26), and a head arm assembly (28) mounted for rotation relative to the stationary portion about a longitudinal axis (30). The head arm assembly comprises at least one transducer support arm (34, 52 to 66) extending radially of the longitudinal axis and carrying at least one magnetic transducing head (36) at a location remote from the longitudinal axis. The stationary portion includes a permanent magnet (114, 116) and the head arm assembly includes an electrically conductive voice coil (108) arranged so as to co-operate for rotating the head arm assembly relative to the stationary portion for positioning said at least one magnetic transducing head in use. The permanent magnet has a magnet face (120) extending generally parallel to the longitudinal axis and in an arc about the longitudinal axis, and the electrically conductive voice coil defines a longitudinally extending surface, which is curved to conform with the magnet face, the electrically conductive voice coil having a thickness in the radial direction which is substantially less than its dimensions in the longitudinal and circumferential directions.

[Figures 4 and 6]

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