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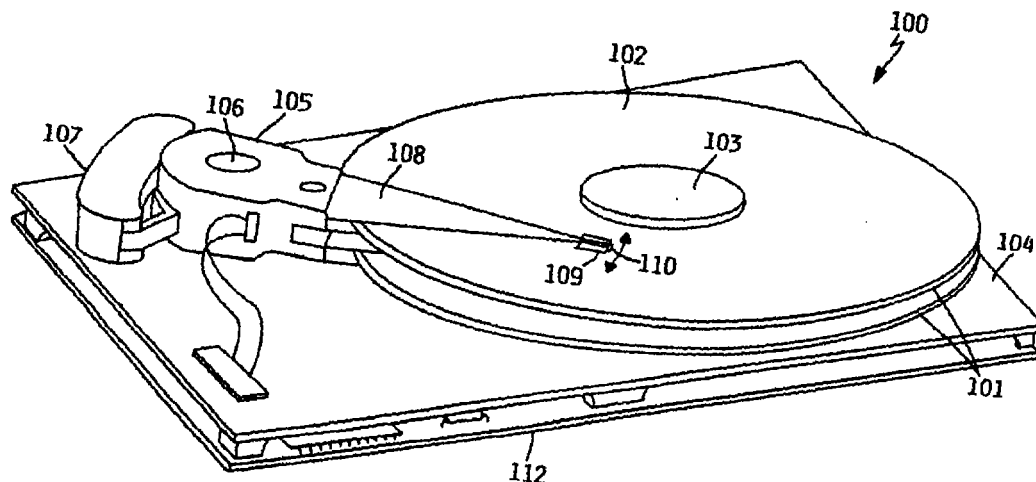
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(54) Title: REDUCED NOISE ELECTRIC MOTOR FOR DISK DRIVE DATA STORAGE DEVICES



(57) Abstract: An electric motor, which is preferably a disk drive spindle motor, contains a multi-phase stator driven by switching the phases of drive current at corresponding commutation angles of the rotor. Small semi-random offsets are introduced into the commutation angles at which the drive current is switched, spreading the frequency of excitation over a wider range, and reducing the peak harmonic excitation at the switching frequency. Preferably, a table of offsets is maintained, and an offset from the table is added to each commutation point. The table preferably has more entries than the number of commutation points, the entries being cycled on a round-robin or other basis.

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