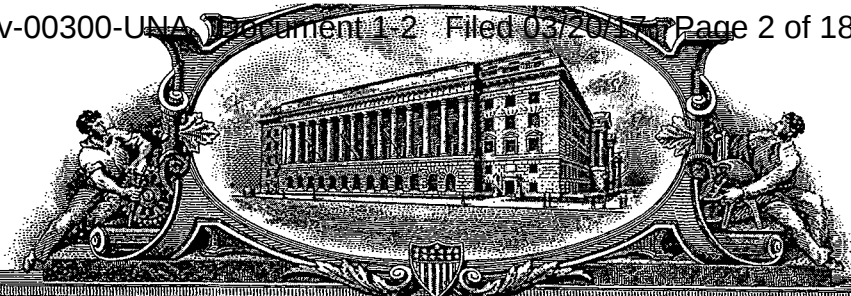


EXHIBIT 2

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U.S. PATENT: 7,067,952

ISSUE DATE: June 27, 2006

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(12) **United States Patent**
Neal

(10) **Patent No.:** US 7,067,952 B2
(45) **Date of Patent:** Jun. 27, 2006

(54) **STATOR ASSEMBLY MADE FROM A MOLDED WEB OF CORE SEGMENTS AND MOTOR USING SAME**

(75) **Inventor:** Griffith D. Neal, Alameda, CA (US)

(73) **Assignee:** Encap Motor Corporation, Alameda, CA (US)

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 248 days.

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(22) **Filed:** Mar. 5, 2003

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Related U.S. Application Data

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(51) **Int. Cl.**
H02K 1/18 (2006.01)
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H02K 15/10 (2006.01)

(52) **U.S. Cl.** 310/259; 310/42; 310/45; 310/218

(58) **Field of Classification Search** 310/42-43, 310/45, 216-218, 254, 259; 244/432, 433, 244/433.4; 29/596
See application file for complete search history.

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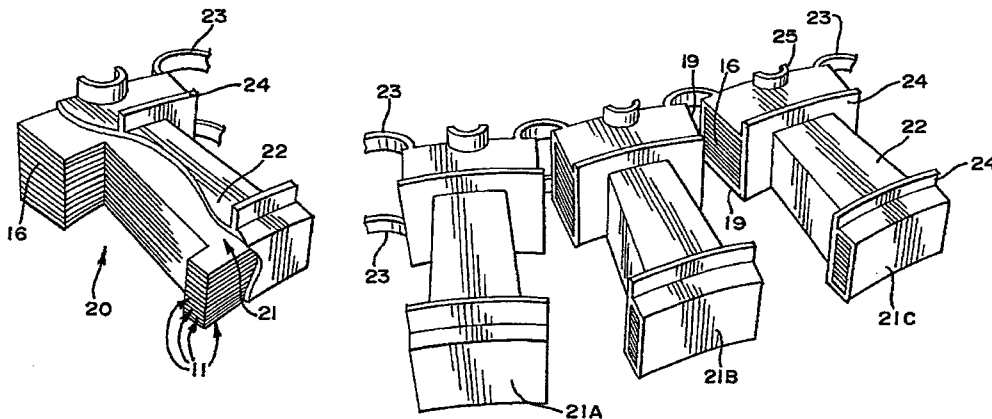
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(57) **ABSTRACT**

A plurality of stator arc segments 20 are linked together by a phase change material 22 enabling simplified winding and higher slot fill. Once wound this continuous structure can be formed into a toroidal core 17 for a stator assembly 40 used to make a motor 100. In a preferred embodiment, a monolithic body 42 of phase change material substantially encapsulates the conductors and holds the stator arc segments 20 in contact with each other in the toroidal core 17. Hard disc drives using the motor 100, and methods of constructing the motor 100 are also disclosed.

14 Claims, 5 Drawing Sheets



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