



US007471025B2

(12) **United States Patent**
Sheeran et al.

(10) **Patent No.:** **US 7,471,025 B2**
(45) **Date of Patent:** **Dec. 30, 2008**

(54) **SEGMENTED STATOR WITH IMPROVED HANDLING AND WINDING CHARACTERISTICS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(Continued)

(21) Appl. No.: **12/029,998**

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(22) Filed: **Feb. 12, 2008**

International Search Report, PCT/US03/32557, dated Feb. 27, 2004, 3 pgs.

(65) **Prior Publication Data**

US 2008/0129142 A1 Jun. 5, 2008

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Related U.S. Application Data

(57) **ABSTRACT**

(60) Continuation of application No. 11/534,705, filed on Sep. 25, 2006, now Pat. No. 7,345,397, and a division of application No. 10/427,450, filed on Apr. 30, 2003, now Pat. No. 7,111,380.

(60) Provisional application No. 60/422,676, filed on Oct. 31, 2002.

A stator assembly has discrete stacks of laminations. A plurality of nonmagnetic containment structures define pockets. The stacks are at least partially received in the pockets and coupled to one another by the containment structure. The containment structures are moveable between a first configuration in which the stacks are separate from one another and a second configuration in which yokes of adjacent stacks are in physical contact with one another. In a method of making a stator assembly, a plurality of stator segments are positioned so each is received in one of a plurality of pockets in a containment structure. Coils are wound around each stator segment while the containment structure prevents the stator segment from having direct physical contact with another stator segment. The containment structure is reconfigured to bring the wound stator segments into contact with one another, thereby forming a closed magnetic circuit.

(51) **Int. Cl.**
H02K 1/06 (2006.01)

(52) **U.S. Cl.** **310/217; 310/218**

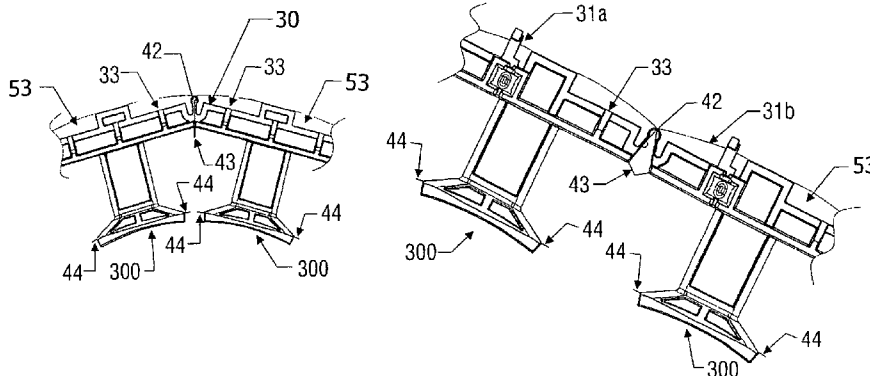
(58) **Field of Classification Search** 310/216–218
See application file for complete search history.

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8 Claims, 9 Drawing Sheets



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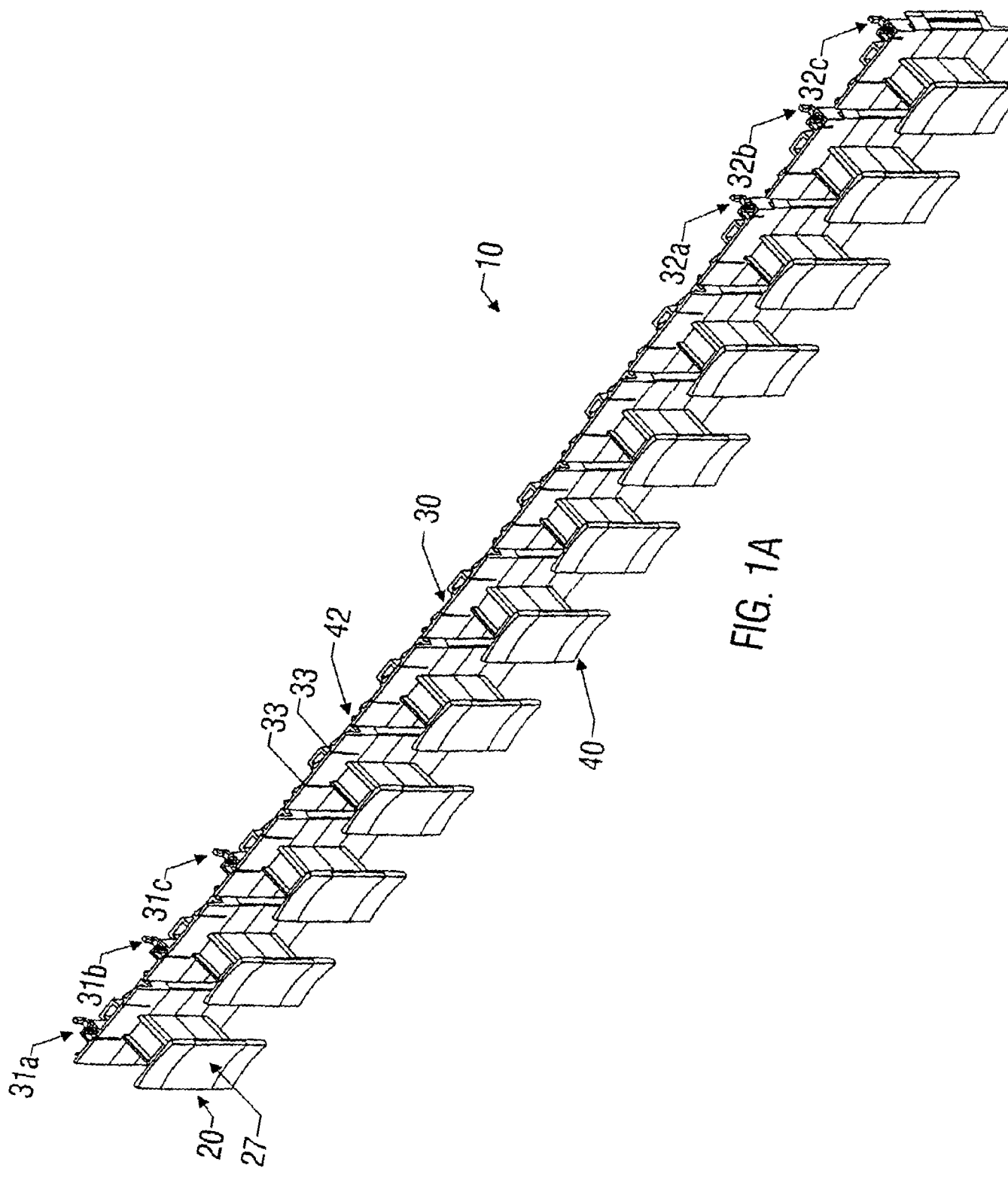
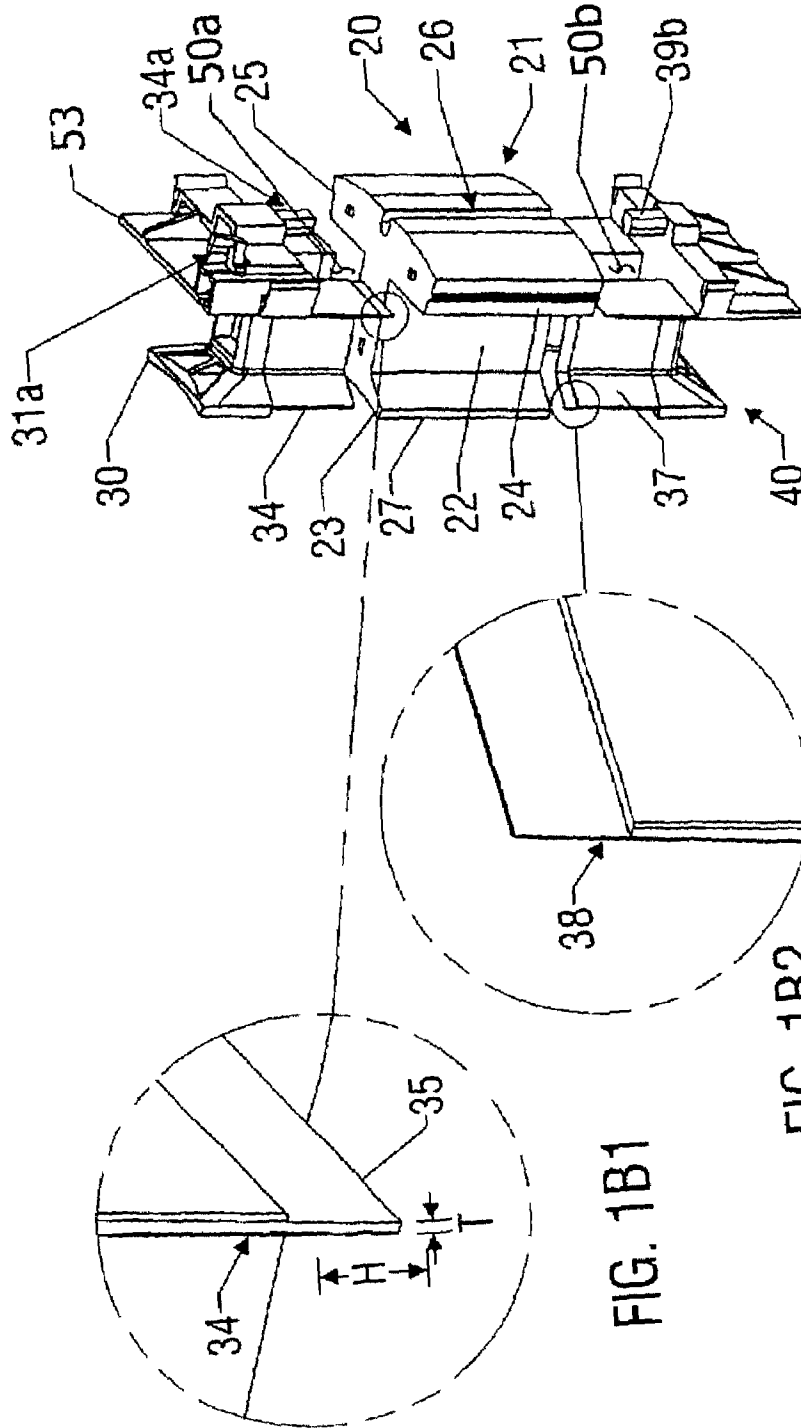


FIG. 1A



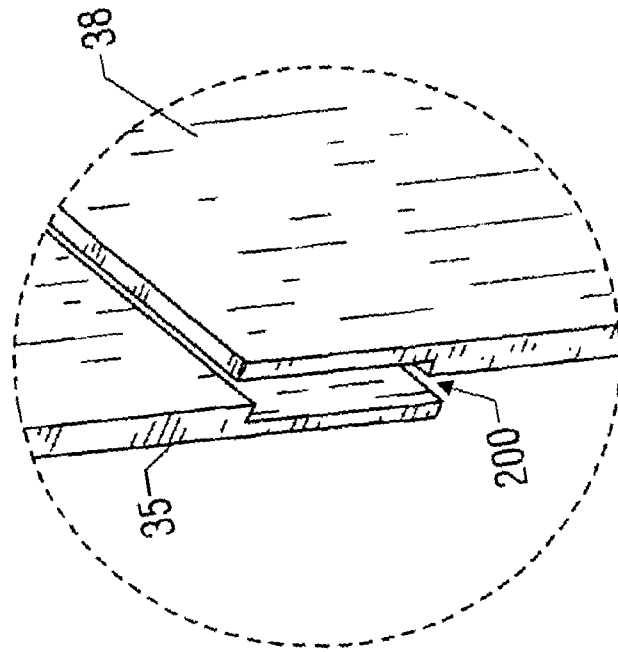


FIG. 1D

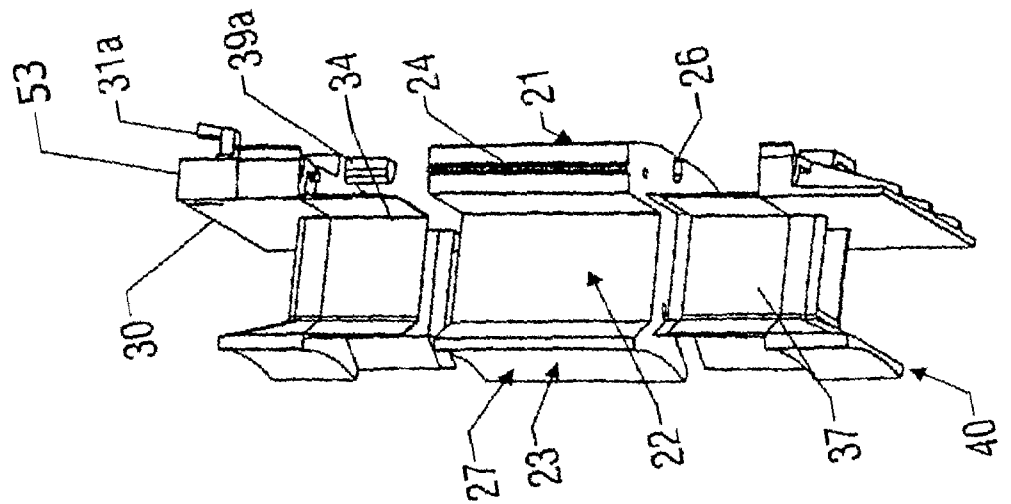


FIG. 1C

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