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United States Patent [19]
Ruiz

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[54] **LOW PROFILE INTEGRAL FLEXURE FOR CLOSELY PACKED DISKS IN A DISK DRIVE ASSEMBLY**

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[73] Assignee: **International Business Machines Corporation**, Armonk, N.Y.

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[21] Appl. No.: **585,983**

[22] Filed: **Jan. 12, 1996**

[51] Int. Cl.⁶ **G11B 5/60**

[52] U.S. Cl. **360/104**

[58] Field of Search 360/97.01, 98.01,
360/104-106

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Assistant Examiner—Jefferson Evans

Attorney, Agent, or Firm—Baker, Maxham, Jester & Meador

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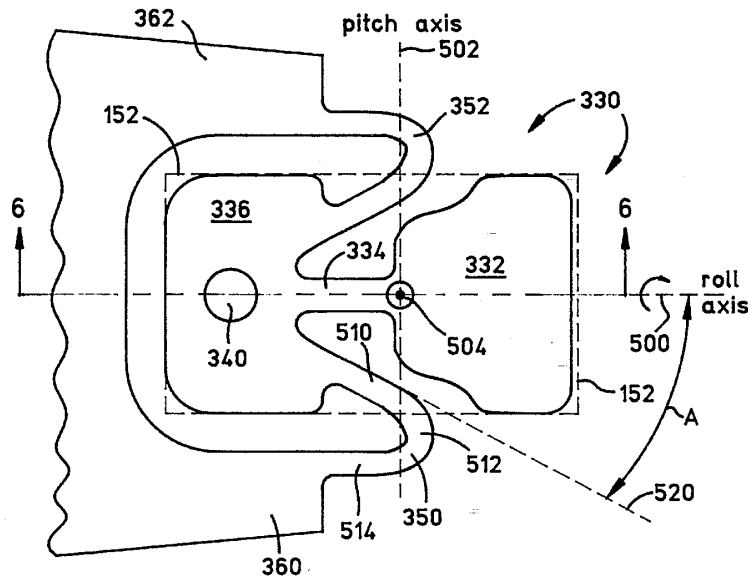
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[57] **ABSTRACT**

A load beam having an integral flexure for coupling a transducer head in a disk drive assembly. The integral flexure includes a pair of bending bars connected to the main body of the load beam, a floating pad connected to the bending bars, and a dimple formed on the floating pad. A torsion bar connects the floating pad with a bonding pad. The transducer head is adhesively coupled to the bonding pad, and rests upon the dimple. In operation, the dimple provides preload and allows gimbaling along the pitch and roll axis, but yaw movement is substantially prevented by the geometry of the load beam design. The integral flexure has a low profile and will fit within a very small space between closely-spaced disks in a stacked multiple disk drive system.

22 Claims, 8 Drawing Sheets



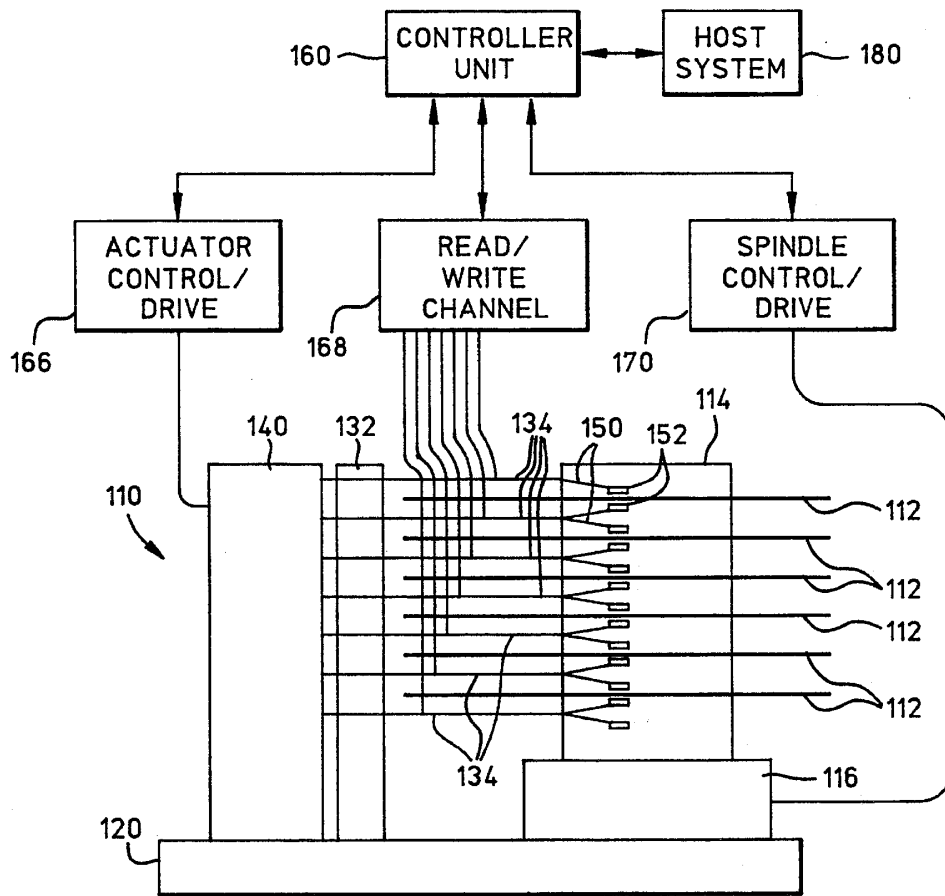


FIG. 1

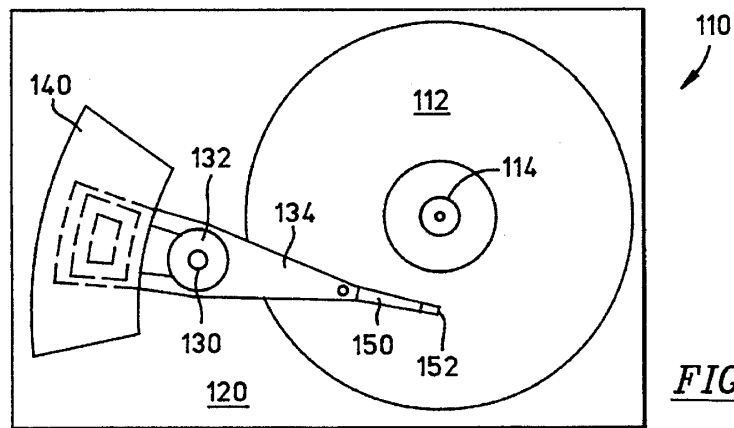


FIG. 2

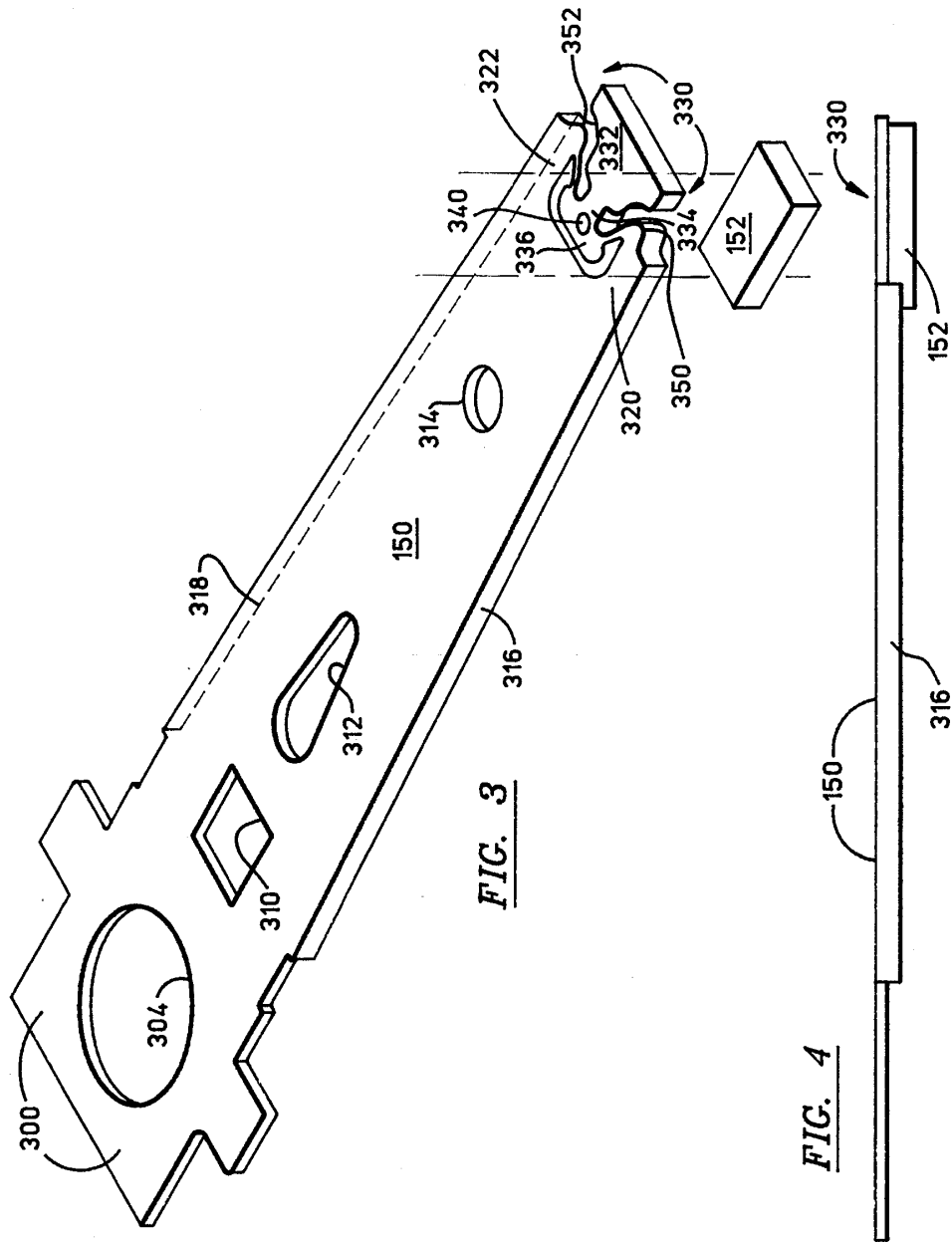


FIG. 3

FIG. 4

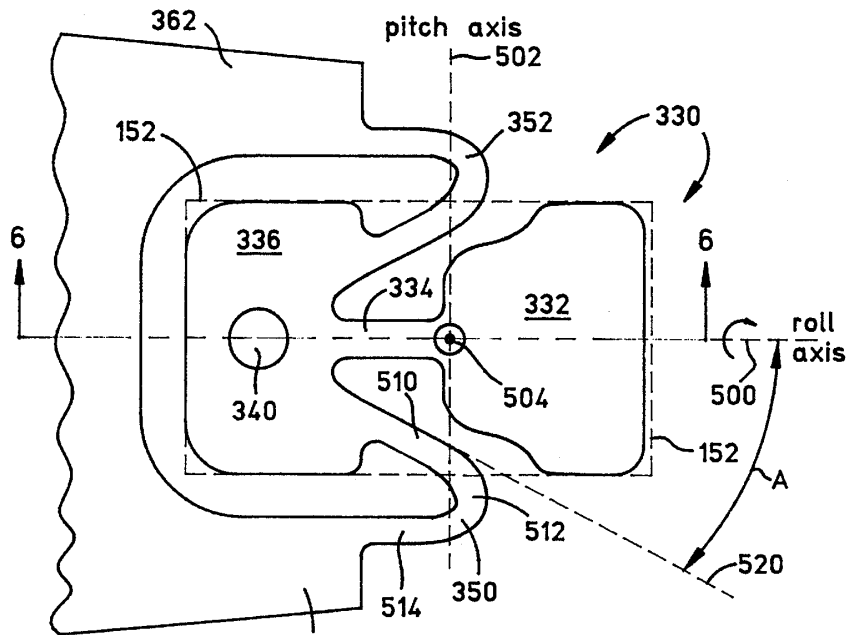


FIG. 5

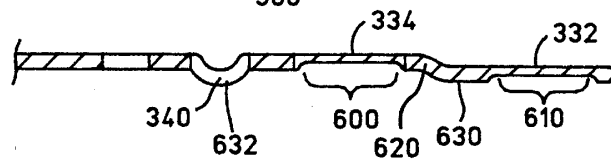


FIG. 6

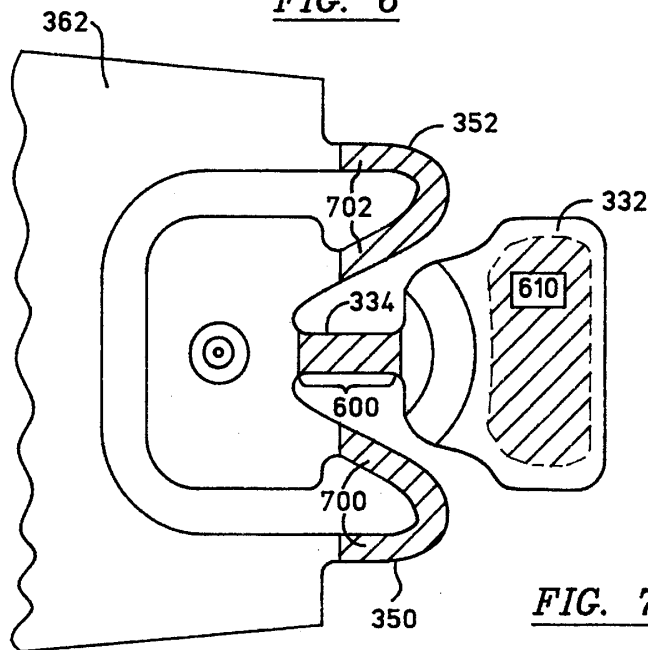


FIG. 7

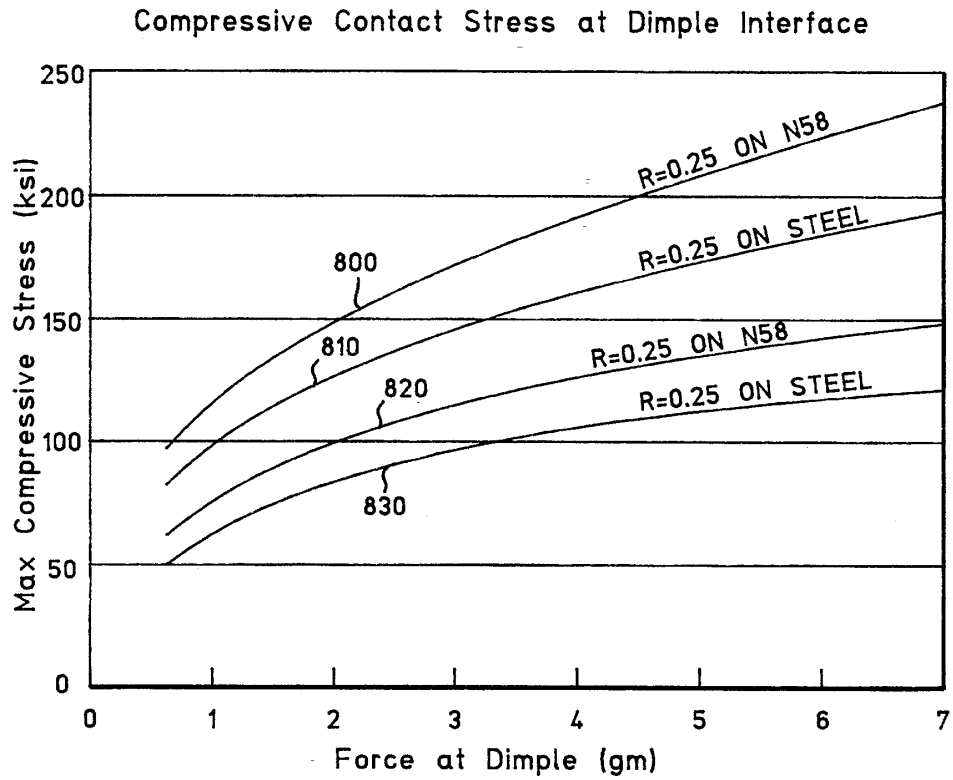


FIG. 8

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