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# United States Patent [19]

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Marr et al.

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[54] **GONIOMETER LOADER FOR TESTING THE HEIGHT OF A DISK DRIVE HEAD GIMBAL ASSEMBLY**

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[57] **ABSTRACT**

[73] Assignee: **Phase Metrics**, San Diego, Calif.

A hard disk drive flying height tester loader which moves a head gimbal assembly (HGA) about the pivot axis of the HGA. The HGA is mounted to a clamp that is attached to a pivot arm. The pivot arm is attached to a cam follower which follows a cam. The cam is moved by a motor that is attached to a stationary sideplate. Movement of the cam rotates the pivot arm, clamp and HGA between a first position and a second position. The pivot arm is coupled to the stationary sideplate by a ball bearing assembly which has a radius of curvature. The center of the ball bearing radius intersects the pivot axis of the HGA so that the clamp and HGA rotate about the pivot axis when the motor and cam move the pivot arm between the first and second positions.

[21] Appl. No.: **561,691**

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[51] Int. Cl.<sup>6</sup> ..... **G01B 11/14**

[52] U.S. Cl. .... **73/432.1; 356/357**

[58] Field of Search ..... **73/432.1; 356/357, 356/243; 324/212**

[56] **References Cited**

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**17 Claims, 4 Drawing Sheets**

