

United States Patent [19]

Hagan et al.

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[54] **MAGNETIC DISK COATING METHOD AND APPARATUS**

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[52] U.S. Cl. **427/130; 118/52; 118/107; 118/240; 118/401; 118/409; 427/240; 427/377**

[58] Field of Search **427/240, 130, 128, 377; 118/52, 240, 401, 409, 107**

[56] **References Cited**

U.S. PATENT DOCUMENTS

- 4,133,911 1/1979 Koester et al. 427/130
- 4,201,149 5/1980 Koester et al. 118/52
- 4,393,807 7/1983 Fujimura et al. 118/52

- 4,416,213 11/1983 Sakiya 118/52
- 4,485,758 12/1984 Peugh et al. 118/52

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[57] **ABSTRACT**

A rigid magnetic disk substrate is spin coated using a closely confining, stationary air barrier adjacent the surface being coated. The coating is applied through a slotted opening in the air barrier which is progressively closed as the coating is applied and completely sealed during the spin-off operation. During the application of the coating, the air barrier is positioned approximately 0.15 inch from the disk substrate surface and prior to spin-off, the barrier is moved to a position 0.025 inch from the coated surface. Further, during the high speed spin-off cycle a high kinematic viscosity gas, such as helium, is introduced into the space between the barrier and the coated surface to establish a laminar flow condition and eliminate spoking of the coated material.

10 Claims, 2 Drawing Figures

