PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G11B 11/10, 7/12

A1

(11) International Publication Number: **WO 98/09284**

(43) International Publication Date: 5 March 1998 (05.03.98)

(21) International Application Number: PCT/US97/15094

(22) International Filing Date: 27 August 1997 (27.08.97)

(30) Priority Data:
60/025,801 27 August 1996 (27.08.96) US
08/731,214 10 October 1996 (10.10.96) US

(71) Applicant: QUINTA CORPORATION [US/US]; 1870 Lundy Avenue, San Jose, CA 95131 (US).

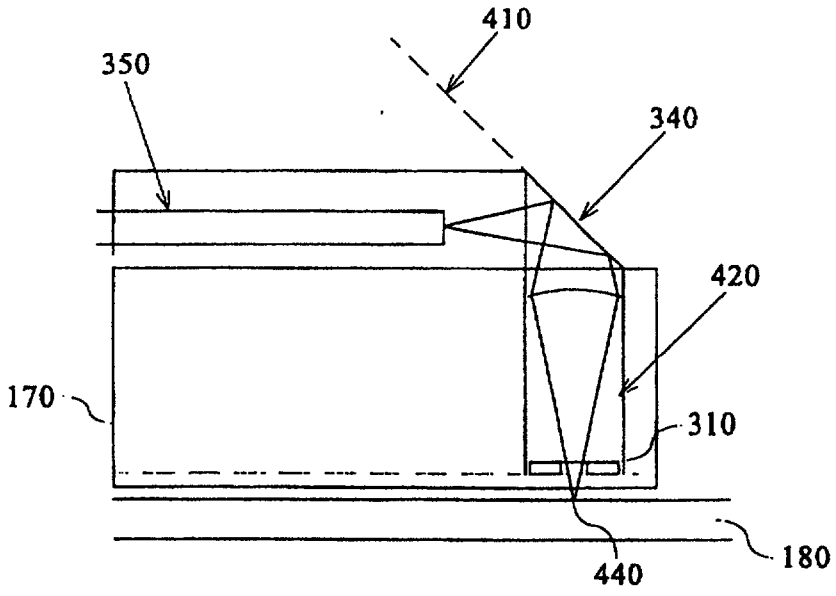
(72) Inventors: WILDE, Jeffery, P.; Unit B, 210 Kittoe Drive, Mountain View, CA 94043 (US). DAVIS, Joseph, E.; 18765 St. Marks Avenue, Morgan Hill, CA 95037 (US). HURST, Jerry, E., Jr.; 1784 Marcy Lynn Court, San Jose, CA 95124 (US). HEANUE, John, F.; Apartment C305, 39281 Red Hawk Terrace, Fremont, CA 94538 (US). PETERSEN, Kurt; 3655 Valley Ridge Lane, San Jose, CA 95148 (US). MCDANIEL, Terry; 16755 Feliz Court, Morgan Hill CA 95037 (US). DRAZAN, Jeff; #6 Cowell, Atherton, CA 94027 (US).

(74) Agents: KOERNER, Gregory, J.; Carr, DeFilippo & Ferrell, Suite 200, 2225 East Bayshore Road, Palo Alto, CA 94303 (US) et al.

(81) Designated States: CN, JP, KR, SG, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: FLYING OPTICAL HEAD WITH DYNAMIC MIRROR



(57) Abstract

A magneto-optical flying head utilizes a steerable mirror (340) in combination with a light source and a lens to write and read data onto a magneto-optical storage disk (180). A beam of laser light transmitted from the light source to the optical head is reflected onto a steerable micro-machined folding mirror (340). The reflected light from the folding mirror (340) is directed through an embedded micro-objective GRIN lens (420). Fine tracking and short seeks to adjacent tracks are performed by rotating the mirror about an axis of rotation. In this way a focus spot is scanned back and forth in a direction which is approximately parallel to the radial direction of the storage disk.