

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN C. DUNFIELD and GUNTER K. HEINE

Appeal No. 1998-0828
Application 08/438,091

ON BRIEF

Before KRASS, JERRY SMITH and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1, 2, 4-19, 21-24 and 27-33, which constitute all the claims remaining in the application. An amendment after final rejection was filed on December 30, 1996 but was denied entry by the examiner.

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The disclosed invention pertains to a method and apparatus for positioning a transducer having read and write heads in a disc drive.

Representative claim 1 is reproduced as follows:

1. An apparatus in a disc drive for positioning a transducer relative to a magnetic disc, the magnetic disc having a surface and a track on the surface, the apparatus comprising:

- a rotary actuator;
- an actuator arm coupled to the rotary actuator;
- a load beam coupled to the actuator arm;
- a suspension coupled to the load beam;
- an air bearing coupled to the suspension;
- a transducer coupled to the air bearing and positioned to access the surface of the disc, the transducer having a pair of spaced disc accessing elements;
- a second actuator operably coupled to the air bearing and the load beam and being controllable to move the air bearing relative to the surface of the disc and relative to the load beam; and
- a controller, coupled to the second actuator to reposition the transducer to align one of the pair of spaced disc accessing elements with the track on the surface of the disc, the controller varying an amount by which the transducer is repositioned based on a radial position of the track on the surface of the disc and based on spacing between the disc accessing elements on the transducer.

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The examiner relies on the following references:

Pierce et al. (Pierce)	3,863,124	Jan. 28, 1975
Elliott	3,914,541	Oct. 21, 1975
Frandsen	4,314,295	Feb. 02, 1982
Chi	4,802,033	Jan. 31, 1989
Nihei et al. (Nihei)	5,055,731	Oct. 08, 1991
Mori et al. (Mori)	5,189,578	Feb. 23, 1993
Imamura et al. (Imamura)	EP 0549814	July 07, 1993

The following rejections are on appeal before us:

1. Claims 19 and 21-24 stand rejected under 35 U.S.C. § 112, first paragraph, as being based on an inadequate disclosure.
2. Claims 19, 21, 22 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Mori.
3. Claim 23 stands rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Nihei.
4. Claims 2, 5, 8, 14, 17, 18, 27-29 and 33 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi.
5. Claims 4, 6, 30 and 32 stands rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi and Pierce.
6. Claim 1 stands rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Elliott.

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7. Claims 7 and 31 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi and Elliott.

8. Claims 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi and Nihei.

9. Claims 9 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi and Frandsen.

10. Claims 11-13 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi, Frandsen and Imamura.

11. Claims 28 and 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over the teachings of Mori in view of Chi¹.

Rather than repeat the arguments of appellants or the examiner, we make reference to the brief and the answer for the respective details thereof.

¹ This rejection was added as a new ground of rejection in the examiner's answer.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of anticipation and obviousness relied upon by the examiner as support for the prior art rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the specification properly supports the invention of claims 19 and 21-24. We are also of the view that the evidence relied upon by the examiner does not support any of the prior art rejections made by the examiner. Accordingly, we reverse.

We consider first the rejection of claims 19 and 21-24 under the first paragraph of 35 U.S.C. § 112. With respect to independent claim 19, the examiner asserts that the claimed invention lacks written description in the specification. Specifically, the examiner states that the phrase "moving the air bearing relative to the actuator arm without deflecting the air bearing" is not supported by the original specification because

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moving the air bearing deflects the structure by definition [answer, page 4].

Appellants argue that the specification clearly demonstrates that the microactuators move the heads via deflection of cantilevered beams and not by deflection of the air bearing [brief, pages 6-7]. The examiner responds that the phrase is a contradiction in terms because if an object is moved, it is deflected [answer, page 10].

We do not sustain this rejection of the claims. The examiner is equating the word deflecting with the word moving. We interpret the use of deflecting in claim 19 to mean a structural deflecting of the air bearing. Thus, an air bearing can be moved from one location to another location without causing a structural deflection of the air bearing itself. When interpreted in this manner, the specification clearly provides support for the invention of claim 19. Therefore, this rejection of claims 19 and 21-24 is not sustained.

We now consider the rejection of claims 19, 21, 22 and 24 under 35 U.S.C. § 102(b) as anticipated by the disclosure of Mori. These claims are argued as a single group. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every

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element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

With respect to representative, independent claim 19, the examiner indicates how he reads the claimed invention on the disclosure of Mori [answer, pages 4-5]. Appellants argue that Mori does not disclose a controllable microactuator being located closer to the air bearing than the actuator arm [brief, pages 7-9]. The examiner responds that Mori performs in the same manner as the claimed invention. The examiner notes that the microactuator of Mori is closer to the head than the voice coil actuator [answer, page 10].

The examiner has not properly considered the claimed invention. Claim 19 does not recite that the microactuator is located closer to the air bearing than the voice coil actuator. Instead, claim 19 recites that the microactuator is located closer proximate the air bearing than the actuator arm. The microactuator 9a of Mori is not closer to the air bearing than

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guide arm 21 or load arms 22 and 22'. The claimed invention permits the microcontroller to control movement of the air bearing right at the location of the air bearing. The "microcontroller" of Mori can not accomplish this operation. Since there is at least one feature of the claimed invention which is not disclosed in Mori, we do not sustain this rejection of claims 19, 21, 22 and 24.

We now consider the various rejections under 35 U.S.C. § 103. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825

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(1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered and are deemed to be waived by appellants [see 37 CFR § 1.192(a)].

With respect to the rejection of dependent claim 23 based on Mori and Nihei, since Nihei does not overcome the deficiencies in Mori discussed above with respect to the anticipation

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rejection of claim 19, we do not sustain the rejection of claim 23 for the same reasons discussed above.

We now consider the rejection of independent claims 2 and 27 based on Mori and Chi. The examiner finds that Mori teaches the invention of these claims except for the claimed control between read and write operations. The examiner cites Chi as teaching that it was known to calibrate for the offset between read and write heads. The examiner finds that it would have been obvious to the artisan to modify Mori as taught by Chi to permit accurate tracking regardless of the offset between the read and write heads [answer, pages 6-7].

Appellants argue that Mori relates to a linear actuator system to accommodate for offset between a servo head and data heads, not between read and write transducers on a single head. Appellants argue that Mori discloses nothing about a transducer having a pair of spaced disc accessing elements or for compensating for the position offset between spaced read and write transducers. Appellants argue that although Chi discloses a system for adjusting for the offset between read and write transducers on a common support, Chi does not teach the use of a second actuator for accomplishing this offset compensation. Appellants also argue that there is no motivation to combine the

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teachings of Mori and Chi [brief, pages 9-13]. The examiner responds that Chi teaches to compensate for the offset between integral read and write heads [answer, page 11].

We do not sustain the rejection of independent claims 2 and 27 because the examiner has failed to negate the persuasive arguments of appellants. We agree with appellants that Chi appears to show the compensation of offset which is built into a single actuator. The examiner has not pointed to two separate actuators as required by the claims. Although Mori shows different actuators, these actuators do not compensate for offset resulting from spaced disc accessing elements. Therefore, there is no motivation from within Mori and Chi as to why Mori, which does not relate to offset compensation, would have been modified to account for such compensation as taught by Chi. We also find no teaching within the applied references that the second actuator is controlled between read and write operations as recited in claims 2 and 27. Since appellants' arguments are persuasive of error in the examiner's rejection, we do not sustain the rejection of independent claims 2 and 27.

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We also do not sustain the rejection of any of the claims which depend from claims 2 or 27. Neither Pierce, Elliott, Nihei, Frandsen or Imamura, either alone or in combination, overcomes the deficiencies in the teachings of Mori alone or Mori in view of Chi as discussed above.

We now consider the rejection of independent claim 1 based on Mori and Elliott. The examiner indicates how he finds the invention of claim 1 to be obvious [answer, page 7]. Appellants argue that claim 1 not only recites the two actuators as in claims 2 and 27, but also recites that the adjustment for the offset is based upon the radial position of the track. Appellants argue that Elliott does not teach or suggest a system for compensating for offset variations between read and write transducers and a data track based upon the x-y orientation of read and write transducers at various radial positions of the data heads [brief, pages 13-17]. The examiner disagrees [answer, page 11].

We agree with appellants for reasons set forth in the brief. We do not find the transducer having a pair of spaced disc accessing elements and the second actuator for controlling the air bearing based on the radial position of the track as claimed. Therefore, we do not sustain the rejection of claim 1.

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In summary, we have not sustained any of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1, 2, 4-19, 21-24 and 27-33 is reversed.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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JERRY SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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)	
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JS/ki

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