The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KEVIN JON SCHULZ,
AND ADAM KARL HIMES

Appeal No. 2003-0785
Application 09/457,816

ON BRIEF

Before JERRY SMITH, KRASS and GROSS, 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 1-12 and 15, which constitute all the claims remaining in the application.

The disclosed invention pertains to a disc drive and especially to a flexible circuit having a dielectric liquid crystal substrate for carrying the conductive elements attached to the transducer head of the disc drive.

Representative claims 1 and 2 are reproduced as follows:

1. A disc drive comprising:

a selection means for positioning a transducer at a select point in space; and

a conducting means for providing electrical connection between the transducer and an external circuit.

2. A disc drive comprising:

at least one data storage disc;

a suspension assembly that includes a transducer head supported on an adjustable arm; and

a flexible circuit comprising an electrically conductive element and a dielectric liquid crystal substrate laminated to the conductive element, the flexible circuit being electrically connected to the transducer head and the transducer head being configured to be carried proximate a surface of a spinning data storage disc.

The examiner relies on the following references:

Lambert	5,795,162	Aug. 18, 1998
Boutaghou	5,796,556	Aug. 18, 1998

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by the disclosure of Boutaghou. Claims 2-12 and 15

stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Boutaghou in view of Lambert.

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

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 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 evidence relied upon supports the examiner's rejection of claim 1. We reach the opposite conclusion with respect to claims 2-12 and 15. Accordingly, we affirm-in-part.

We consider first the rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Boutaghou. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of

inherency, each and every 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).

The examiner has indicated how he reads the invention of claim 1 on the disclosure of Boutaghou [answer, page 3]. Appellants argue that claim 1 must be interpreted in accordance with the sixth paragraph of 35 U.S.C. § 112. They argue that when claim 1 is properly interpreted in light of the corresponding disclosure, the conducting means of Boutaghou fails to meet the disclosed flexible circuit having a dielectric liquid crystal substrate [brief, pages 7-9]. The examiner responds that the electrical traces in Boutaghou are structural equivalents to the electrical traces disclosed by appellants. The examiner also notes that the claimed conducting means does not include the dielectric liquid crystal substrate because the substrate does not provide electrical connections [answer, pages 5-7].

We will sustain the examiner's rejection of claim 1 for essentially the reasons argued by the examiner in the answer. We agree with the examiner that the dielectric liquid crystal substrate of appellants' invention does not perform the functions of positioning a transducer or providing electrical connection between the transducer and an external circuit. Even though we agree with appellants that claim 1 must be construed in accordance with the requirements of the sixth paragraph of 35 U.S.C. § 112, the general rule still applies that during prosecution claims are given their broadest reasonable interpretation. We see no reason why the dielectric liquid crystal substrate should be read into claim 1 when the conducting means of claim 1 can be met by the disclosed electrical traces as argued by the examiner. Therefore, the scope of claim 1 is broad enough to be fully met by the disclosure of Boutaghou.

We now consider the rejection of claims 2-12 and 15 under 35 U.S.C. § 103 based on the teachings of Boutaghou and Lambert. 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 (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 [see 37 CFR § 1.192(a)].

Appellants have indicated that for purposes of this appeal these claims will all stand or fall together as a single group [brief, page 5]. Consistent with this indication appellants have made no separate arguments with respect to any of these claims. Accordingly, all these claims will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 2 as representative of all the claims on appeal.

The examiner finds that Boutaghou teaches a disc drive in which a flexible circuit has a substrate made of polyamide or "other preferably suitable material." The examiner asserts that the artisan would be aware of other preferably suitable materials, and the examiner cites Lambert as teaching "Vectran," a liquid crystal polymer (LCP) that appellants disclose as being

a suitable dielectric liquid crystal polymer for their invention. The examiner asserts that choosing an LCP like “Vectran” would have been found through routine engineering optimization and experimentation as a preferably suitable material [answer, pages 3-4].

Appellants argue that neither Boutaghou nor Lambert provides any disclosure directed to a disc drive that incorporates a flexible circuit having a dielectric liquid crystal substrate as recited in claim 2. Appellants argue that the motivation proposed by the examiner is too speculative to support the rejection. Appellants assert that the examiner has provided no objective evidence that shows a motivation to combine the references. Appellants also argue that the claimed dielectric liquid crystal substrate achieves unobvious and unexpected results [brief, pages 9-12].

The examiner responds that the reference to other preferably suitable materials in Boutaghou provides a suggestion to artisans to look for other suitable materials in the flexible circuit art. The examiner asserts that the LCP taught by Lambert would be known to have the properties desired for the flexible circuit of Boutaghou [answer, pages 7-8].

We will not sustain the examiner's rejection of claims 2-12 and 15. The disclosure in Boutaghou that the carrier can be made of polyamide or "other preferably suitable materials" is nothing more than an invitation to artisans to try to find other suitable materials. This disclosure offers no guidance as to what these other preferably suitable materials might be. Thus, the quoted passage from Boutaghou is nothing more than an invitation to try other materials. Such an invitation to try other materials does not make any specific material necessarily obvious under 35 U.S.C. § 103. If the only requirement for the carrier of a disc drive assembly was that it be a dielectric or that it be flexible, we might agree with the examiner that any known flexible dielectric would have been obvious to the artisan. The carrier of a disc drive assembly, however, must also possess specific aerodynamic properties that permit the transducer head to accurately read and write data to and from a disc while riding on an air bearing. The examiner has provided no evidence that an artisan would have identified a dielectric liquid crystal substrate as a suitable material for the carrier of a disc drive assembly. The secondary reference Lambert merely establishes that LCPs were known in the art as flexible dielectrics. Lambert was cited by the examiner only because it mentions the LCP

disclosed by appellants as suitable for their invention. Lambert is not from the disc drive art, and Lambert provides no motivation to use an LCP in a disc drive assembly. Thus, we agree with appellants that there is no motivation within the applied prior art to combine their respective teachings to arrive at the claimed invention.

In summary, we have sustained the examiner's rejection of claim 1, but we have not sustained the examiner's rejection of claims 2-12 and 15. Therefore, the decision of the examiner rejecting claims 1-12 and 15 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

ERROL A. KRASS Administrative Patent Judge	)
JERRY SMITH Administrative Patent Judge	) BOARD OF PATENT) APPEALS AND) INTERFERENCES
ANITA PELLMAN GROSS Administrative Patent Judge	)

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