

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DEREK C. CARBIN, JEFFREY T. GRAY
and JOHN A. ANDRESAKIS

Appeal No. 2005-0646
Application No. 10/278,184

ON BRIEF

Before THOMAS, SMITH and BARRETT, 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 15-28. Pending claims 1-14 stand withdrawn from consideration by the examiner as being directed to a non-elected invention.

The disclosed invention pertains to a printed circuit heater formed by a specific process.

Representative claim 15 is reproduced as follows:

15. A printed circuit heater formed by a process comprising the steps of:

- a) depositing a thin metal or metal alloy layer onto a surface of a metal carrier foil, which thin metal or metal alloy layer has a thickness of about 0.1 μm to about 2 μm , thereby forming a composite;
- b) attaching the composite to a substrate such that the thin metal or metal alloy layer is in contact with the substrate, thereby forming a laminate;
- c) selectively removing at least a portion of the metal carrier foil from portions of the laminate; and
- d) patterning and etching the thin metal or metal alloy layer such that the etched thin metal layer has a heat density of from about 0.5 watts/in² to about 20 watts/in² at voltages from about 3 volts to about 600 volts.

The examiner relies on the following references:

Sato et al. (Sato)	4,882,455	Nov. 21, 1989
Lindblom et al. (Lindblom)	5,038,132	Aug. 06, 1991
Lee et al. (Lee)	6,194,990	Feb. 27, 2001
Teshima et al. (Teshima)	6,457,632	Oct. 01, 2002

Claims 15-18 and 23-28 stand rejected under 35 U.S.C.

§ 102(b) as being anticipated by the disclosure of Lee. Claims 19-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Lee in view of Sato, Teshima or Lindblom.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs 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 briefs 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 each of the examiner's rejections of the claims on appeal. Accordingly, we affirm.

We consider first the rejection of claims 15-18 and 23-28 as being anticipated by the disclosure of Lee. 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). Appellants have indicated that these claims all stand or fall together as a single group except for claim 26 which stands or falls separately [brief, page 4]. Therefore, we will consider this rejection with respect to claims 15 and 26 only.

With respect to representative claim 15, the examiner has indicated how he reads the claimed invention on the disclosure of Lee [answer, page 3]. Appellants argue that claim 15 recites a printed circuit heater whereas Lee relates to thin film resistors rather than printed circuit heaters. Appellants also argue that even though the resistor of Lee may produce some heat, there is no indication that the Lee resistor can function as a heater. Appellants argue that there is no mention of heat density in Lee, let alone a disclosure that the heat density meets the recitations of claim 15. Appellants argue that there is no evidence that the Lee resistor is even capable of operating at the claimed range of 3-600 volts. Appellants argue that the examiner's rejection is based on mere speculation as to whether the Lee resistor can meet the operating requirements recited in claim 15 [brief, pages 4-6].

The examiner responds that since all resistors produce heat, the resistor of Lee can be considered to be a heater. The

examiner also responds that the resistor of Lee has the same resistance, the same substrate and the same dimensions as the disclosed and claimed heater. The examiner points out that using well known formulas for calculating power density, the resistor of Lee would meet the claimed heat density recitations when operating from 3 volts to about 600 volts. Thus, the examiner points out that since Lee discloses the same materials and dimensions as appellants do in their specification, the resistor in Lee must operate in the same manner as the claimed invention [answer, pages 5-9]. Appellants respond by essentially repeating the arguments made in the main brief [reply brief].

We will sustain the examiner's rejection of representative claim 15 for essentially the reasons argued by the examiner in the answer. First, we agree with the examiner that appellants cannot distinguish their product from the structure disclosed in Lee by calling their product a heater. As noted by the examiner, any conventional resistor will produce heat as an energy loss. Thus, the resistor of Lee will generate heat and, is therefore, technically a heater. Second, the examiner has demonstrated that Lee teaches a process of manufacturing a product that uses the same materials disclosed by appellants, has dimensions that fall within the claimed range, and would

inherently have a power density that falls within the range recited in claim 15 when operated within the claimed voltage range. The examiner's position is that the device disclosed by Lee will have the properties recited in claim 15 because it is made from the same materials as disclosed by appellants and has dimensions within the claimed range.

In our view, this position of the examiner appears correct and establishes a prima facie case of anticipation. The gist of appellants' argument is that there is no evidence that the resistor (heater) of Lee will operate as a heater at the claimed voltage range. The requisite evidence, however, is the fact that the materials and dimensions disclosed by Lee are the same as the materials disclosed by appellants and the dimensions claimed. There is a presumption, therefore, that the resistor of Lee will have the same properties as the heater disclosed by appellants. We view this as simply a question of who has met the burden of providing persuasive evidence. Since the examiner's demonstration has established a prima facie case of anticipation, the burden shifted to appellants to provide evidence to rebut the examiner's case. As noted above, appellants' "evidence" consists of nothing more than arguments by appellants' representative that the resistor of Lee may not operate in the same manner as the

claimed heater even though the Lee resistor and the disclosed heater appear to be the same in basic structure. Appellant's arguments are insufficient to carry the burden of demonstrating that the prima facie case of anticipation established by the examiner is erroneous.

With respect to separately argued claim 26, the examiner has indicated how he reads the claimed invention on Lee [answer, page 4]. Appellants broadly argue that the structure of claim 26 is not possible from Lee [brief, page 6]. The examiner responds by explaining how the Lee resistor meets the claimed invention. The examiner also notes that appellants have failed to address the examiner's position set forth in the rejection [answer, page 9].

We will sustain the examiner's rejection of claim 26. The examiner has explained how dependent claim 26 is fully met by the disclosure of Lee. The examiner's explanation is sufficient to have established a prima facie case of anticipation. We agree with the examiner that appellants have failed to rebut the examiner's prima facie case of anticipation. There are no arguments directed to the examiner's rationale in support of the rejection of claim 26.

We now consider the rejection of claims 19-22 under 35 U.S.C. § 103 based on Lee and any one of Sato, Teshima or Lindblom. 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 § 41.37(c)(1)(vii)(2004)].

The examiner has indicated how he finds the claimed invention to be unpatentable over the teachings of the applied prior art [answer, page 5]. We find the examiner's rejection sufficient to at least establish a prima facie case of obviousness. Appellants argue that neither Sato, Teshima or Lindblom overcomes the alleged deficiencies of Lee discussed above. Appellants also argue that there is no motivation to combine the teachings of Lee with either Sato, Teshima or Lindblom [brief, pages 7-9]. The examiner responds that each of

the secondary references teaches a substrate made of polyimide or silicone. The examiner notes that the secondary references teach the advantages of using these materials which provides sufficient motivation for their use [answer, page 9]. Appellants respond that there is no evidence that the advantages of the substrate material taught by Sato, for example, would have the same advantages if used in the Lee substrate [reply brief, page 5].

We will sustain the examiner's rejection of claims 19-22 for the reasons argued by the examiner in the answer. The secondary references cited by the examiner provide advantages in the use of polyimide and silicone substrates. The advantages disclosed therein are sufficient to have motivated the artisan to use such substrates in the resistor of Lee. Appellants' argument that there is no evidence that the advantages disclosed by the secondary references would have the same effect in Lee is not persuasive. The artisan would presume that the disclosed advantages would have been retained. The burden was on appellants to provide evidence or arguments as to why the same advantages would not be present in Lee.

In summary, we have sustained each of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 15-28 is affirmed.

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

AFFIRMED

JAMES, D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
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