

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MARCOS Y. KLEINERMAN

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Appeal No. 2006-3241  
Application No. 10/834,332

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ON BRIEF

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Before DIXON, BARRY, and BLANKENSHIP, Administrative Patent Judges.  
BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. ' 134 from the examiner=s rejection of claims 1-18.

We affirm.

BACKGROUND

According to appellant, the invention relates to methods and devices for sensing an imaging infrared, sub-millimeter, and high-energy radiation by means of optical temperature sensors of microscopic dimensions and very small thermal mass attached to absorbers of the radiation. Claim 1 is reproduced below.

1. An essentially planar detector of electromagnetic or other radiation, said detector including an essentially planar absorber of said radiation having dimensions, area and thermal mass not substantially greater than minimally needed for the capture of a desired fraction of the intensity of said radiation incident on the detector and at least one temperature probe attached to or incorporated into said absorber and comprised of a photoluminescent material so characterized that, when illuminated with light of suitable visible or near infrared wavelengths  $\lambda_V$ , and an intensity  $P_0$ , it absorbs a fraction  $\alpha P_0$  of the intensity of said illuminating light, thereby generating a luminescence light separable from the illuminating light, at least part of the intensity of which is emitted from the probe at visible or near infrared wavelengths  $\lambda_f$  different from  $\lambda_V$ , where  $\alpha$  is a temperature-dependent fraction smaller than unity, the value of which varying in a known manner with varying temperature within the temperature range of operation of the probe, the intensity of said luminescence light being substantially proportional to the value of  $\alpha$ , the detector being characterized by undergoing a temperature rise upon the absorption of said radiation and further so characterized that its thermal mass at its operating temperature is not significantly greater than 1.1 times the mass of said absorber alone.

The examiner relies on the following references:

Urbach	US 2,642,538	Jun. 16, 1953
Tricoire	US 3,796,884	Mar. 12, 1974
Kolodner	US 4,819,658	Apr. 11, 1989
Wickersheim	US 5,304,809	Apr. 19, 1994

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Claims 1-18 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1-4, 13, 17, and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wickersheim, Tricoire, Urbach, and Kolodner.

We refer to the Rejection (mailed Sep. 28, 2005) and the Examiner=s Answer (mailed Jun. 16, 2006) for a statement of the examiner=s position and to the Brief (filed Apr. 12, 2006) and the Reply Brief (filed Aug. 15, 2006) for appellant=s position with respect to the claims which stand rejected.

### OPINION

The function of claims is (1) to point out what the invention is in such a way as to distinguish it from the prior art; and (2) to define the scope of protection afforded by the patent. In re Vamco Mach., Inc., 752 F.2d 1564, 1577 n.5, 224 USPQ 617, 635 n.5 (Fed. Cir. 1985). The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The inquiry is merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). The definiteness of the language employed must be analyzed -- not in a vacuum, but in light of the teachings of the prior art and of the particular application

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disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

The examiner lists terms (Answer at 4) appearing in claim 1 that underlie the rejection under 35 U.S.C. ' 112, second paragraph. In our view, the rejection fails to show that any of the recitations, except one, render the claims indefinite. The rejection and underlying arguments do not demonstrate that appellant=s position, as set forth in the briefs, fails to show that the artisan would have understood the metes and bounds of the bulk of the recited functional terms and words of degree.

However, as further explained in material bridging pages 9 and 10 of the Answer, the examiner submits that because all electromagnetic radiation is fairly described by a wavelength and by an energy, the recitation of ~~A~~or other radiation@ in claim 1 creates indefiniteness as to ~~A~~what scope of exclusion is created by the claim.~~@~~

Instant claim 1 recites an essentially planar detector of ~~A~~electromagnetic or other radiation. . . .@ We do not find any direct response to the examiner=s position by appellant in the briefs. However, in the Reply Brief (at 4), appellant contends that ~~A~~such radiation can be of any wavelength withing [sic; within] a very wide range of wavelengths from about  $10^{-6}$  cm to about  $10^{-1}$  cm. . . .@

However, the range of wavelengths from about  $10^{-6}$  cm to about  $10^{-1}$  cm is well within the electromagnetic spectrum. See electromagnetic radiation, (2007), in

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Encyclopaedia Britannica, retrieved Jan. 27, 2007, from Encyclopaedia Britannica Online: <http://www.search.eb.com/eb/article-59190>.<sup>1</sup>

On this record, we thus conclude that the recitation of electromagnetic ~~A~~or other radiation@ renders the claim indefinite under 35 U.S.C. ' 112, second paragraph, because it is not known what ~~A~~other radiation@ the claim may encompass. We therefore sustain the rejection of claims 1-18 under 35 U.S.C. ' 112, second paragraph.

We do not, however, sustain the rejection of claims 1-4, 13, 17, and 18 under 35 U.S.C. ' 103, principally for the reasons expressed by appellant at section 4.3.2 (pages 12 and 13) of the Reply Brief.

The ' 103 rejection asserts that because Wickersham does not disclose the ~~A~~ppropriate material@ for blackened (infrared absorbing) layer 104 in Figure 9 of the reference, the artisan would have looked to other art (i.e., Tricoire) to determine what the material should be.

Tricoire discloses a heat guiding layer 11 (Fig. 1), preferably made of a latex, and blackened by one or more layers of black paint. Tricoire col. 4, ll. 8-19. The blackened layer in Wickersham, however, receives infrared emissions that are imaged by optical system 105, with transfer of the infrared image to a luminescent layer 103. Wickersham col. 10, l. 58 - col. 11, l. 10. Tricoire teaches that the heat guiding layer is part of a thermographic plate that is applied against an area to be surveyed, with the heat

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<sup>1</sup> A printed (3 page) copy of the entry should mail as an attachment to this decision.

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diffused to a sensitive layer 12. Tricoire col. 4, ll. 24-53. We agree with appellant to the extent that, in view of the evidence provided, one skilled in the art would have turned to the requisite teachings described in Tricoire only in an improper hindsight reconstruction of the invention of instant claim 1.

#### CONCLUSION

The rejection of claims 1-18 under 35 U.S.C. § 112, second paragraph, as being indefinite is affirmed.

The rejection of claims 1-4, 13, 17, and 18 under 35 U.S.C. § 103 as being unpatentable over Wickersheim, Tricoire, Urbach, and Kolodner is reversed.

The examiner=s decision to reject claims 1-18 is thus affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a). See 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

JOSEPH L. DIXON )  
Administrative Patent Judge )  
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 ) BOARD OF PATENT  
LANCE LEONARD BARRY ) APPEALS  
Administrative Patent Judge ) AND  
 ) INTERFERENCES  
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HOWARD B. BLANKENSHIP )  
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