

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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROLAND BOSTROM, RAGNVALD OLINGSBERG,
BEZAN NACHEBIA, and DIMITRI TAITIS

Appeal No. 2000-0338
Application No. 08/624,615

ON BRIEF

Before FLEMING, BARRY, and BLANKENSHIP, *Administrative Patent Judges*.

BARRY, *Administrative Patent Judge*.

DECISION ON APPEAL

The examiner rejected claims 9-16. The appellants appeal therefrom under 35 U.S.C. § 134(a). We reverse.

BACKGROUND

The claimed invention detects the formation of ice on the surface of an object such as a road. A conventional ice detector measures the temperature of the surface of a road.

According to the appellants, however, ice can form without any temperature increase in the surface. (Spec. at 1.) For example, they assert that no temperature increase occurs during the slow cooling of a wet surface; temperature decreases only after the ice has formed. (*Id.* at 1-2.)

In contrast, the appellants explain that their invention detects the formation of ice by measuring heat released during the formation. (Appeal Br. at 3-4.) Specifically, the invention features a sensor with a Peltier element. A first contact surface of the element is in thermal contact with a road surface. A second contact surface of the element is in thermal contact with a reference surface. The sensor passively and continuously measures a temperature difference between the first and second contact surfaces. A signal processing device connected to the first and second contact surfaces detects a series of changes in outputs from the sensor that occur when heat generated by the formation of ice is released by the road surface.

Claim 9, which is representative for present purposes,
follows:

9. A device for indicating a formation of ice on a measuring surface of an object exposed to ice formation, said device comprising:

a sensor including a Peltier element having a first contact surface in thermal contact with the measuring surface and a second contact surface in thermal contact with a reference surface within the object at a distance from the measuring surface, said sensor passively and continuously measuring a temperature difference between said first and second contact surfaces of said Peltier element; and

a signal processing device connectable to said first and second contact surfaces of said Peltier element for detecting a series of changes in outputs from said sensor which occur when heat generated in connection with the formation of ice is released by the measuring surface.

(Appeal Br., App.)

The prior art applied by the examiner in rejecting the claims follows:

Boschung	4,222,044	Sep. 9, 1980
Khurgin	4,882,574	Nov. 21, 1989.

Claims 9-16 stand rejected under 35 U.S.C. § 103(a) as obvious over Khurgin in view of Boschung.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 9-16. Accordingly, we reverse.

Rather than reiterate the positions of the examiner or appellants *in toto*, we address the main point of contention therebetween. Admitting that Khurgin's "ice formation indicator . . . does not contain a Peltier element as the ice sensor," (Examiner's Answer at 4), the examiner asserts, "it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a Peltier element in the sensor structure in the ice detector of Khurgin for the purpose of insuring correct and accurate sensors. Also, a versatile, robust system that would work in a myriad of weather conditions and thawing agents would be accomplished." (*Id.* at 4-5.) The appellants argue, "as recited in claim 9, the Peltier element is utilized as a sensor to detect a very, very small change in temperature due to a release of heat when ice is formed. Such use of a Peltier element is in no way

anticipated or rendered obvious by the disclosure in either Khurgin or Boschung." (Reply Br. at 8-9.)

"[T]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant."

In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000)(citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). "[E]vidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. . . ." *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)(citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996); *Para-Ordinance Mfg. v. SGS Imports Intern., Inc.*, 73 F.3d

1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995)). "The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *Id.*, 50 USPQ2d at 1617(citing *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977)).

Here, although Boschung's "sensor unit 4 comprises, instead of the heating element, a plate-shaped cooling element 54, which may, for example, be a so-called Peltier element," col. 4, ll. 48-51, the examiner fails to show clear and particular evidence of the desirability of including such a cooling element in Khurgin's ice detector. His broad conclusory statements of "insuring correct and accurate sensors" and accomplishing "a versatile, robust system that would work in a myriad of weather conditions," standing alone,

are not evidence. More specifically, the examiner neither shows that Khurgin's ice detector is deficient in correctness, accuracy, versatility, robustness, or all-weather performance nor shows that including Boschung's cooling element would cure the deficiency. Absent evidence that Khurgin's ice detector would benefit from Boschung's cooling element, we are not persuaded that teachings from the prior art would have suggested combining the teachings of the references. Therefore, we reverse the rejection of claims 9-16 as obvious over Khurgin in view of Boschung.

CONCLUSION

In summary, the rejection of claims 9-16 under § 103(a) is reversed.

REVERSED

MICHAEL R. FLEMING)	
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)	
Administrative Patent Judge)	

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Once signed, forward to Team 3 for mailing.

APPEAL NO. 2000-0338 - JUDGE BARRY
APPLICATION NO. 08/624,615

APJ BARRY - 2 copies

APJ BLANKENSHIP

APJ FLEMING

Prepared By: APJ BARRY

DRAFT SUBMITTED: 13 Nov 02

FINAL TYPED:

Team 3:

I typed all of this opinion.

Please proofread spelling, cites, and quotes. Mark your proposed changes on the opinion, but **do NOT change matters of form or style. I will include the diskette with the signed copy so that you can make all changes before mailing.**

For any additional reference provided, please prepare PTO 892 and include copy of references

Thanks,
Judge Barry