

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.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 HOWARD R. BERATAN and CHIH-CHEN CHO

Appeal No. 1998-3021
Application No. 08/788,313

ON BRIEF

Before HAIRSTON, FLEMING and GROSS, Administrative Patent
Judges

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1
through 15.

The disclosed invention relates to a method of
fabricating a hybrid thermal detector structure.

Claim 1 is illustrative of the claimed invention, and it
reads as follows:

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1. A method for fabricating a hybrid thermal detector structure, comprising the steps of:

reticulating at least three pixels in a pyroelectric material;

depositing an electrically conductive layer on a first side of said pixels;

depositing a precursor film on said electrically conductive layer;

gelling said precursor film to form a porous film;

attaching electrical contacts to a second side of said pixels; and

coupling said electrical contacts to a sensing integrated circuit structure.

The references relied on by the examiner are:

Robinson et al. (Robinson) 1995	5,457,318	Oct. 10, (filed Apr. 29, 1994)
Gnade et al. (Gnade) 1995	5,470,802	Nov. 28, (filed May 20, 1994)

Hrubesh et al. (Hrubesh), "Processing and Characterization of High Porosity Aerogel Films," Materials Research Society Symposium Proceedings, Volume 371, 1995, pages 195 through 204.

Claims 1, 4 through 10 and 13 through 15 stand rejected

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under 35 U.S.C. § 103 as being unpatentable over Robinson in view of Hrubesh.

Claims 2, 3, 11 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Robinson in view of Hrubesh and Gnade.

Reference is made to the final rejection (paper number 17), the brief and the answer for the respective positions of the appellants and the examiner.

OPINION

The obviousness rejection of claims 1 through 15 is reversed.

The examiner is of the opinion (final rejection, pages 2 and 3) that Robinson discloses all of the claimed steps except for "the steps of depositing a precursor film on the electrically conductive layer and gelling the precursor film to form a porous silicon aerogel film." The examiner indicates (final rejection, page 3) that "Hrubesh teaches a process comprising the steps of applying a precursor film on an electrically conductive layer and gelling the precursor

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film to form a porous silicon aerogel film for use as an infrared detector substrate." Based upon the teachings of Hrubesh, the examiner concludes (Final rejection, page 3) that "it would have been obvious to combine the process of Hrubesh with the process of Robinson because the silicon aerogel film of Hrubesh possesses dielectric and infrared absorbing properties taught as desirable by Robinson."

We agree with the examiner that Hrubesh teaches (page 195) the use of aerogel films in applications involving thermal detectors. On the other hand, we have problems with the examiner's lack of an explanation as to where the aerogel film would be used in the Robinson thermal detector. At what stage of the processing of the Robinson thermal detector would the aerogel film be used? Would the aerogel be used in lieu of the optical coating 38, or would it be used in addition to the optical coating 38? Inasmuch as Hrubesh questions the use of aerogel films on metal surfaces (pages 197 and 198), we find that the appellants have raised a valid question as to why the skilled artisan would place the precursor film taught

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by Hrubesh (page 195) on the electrically conductive electrode layer 34 in Robinson (Brief, page 6). Too many questions remain unresolved as to where and how the aerogel film would be used in Robinson. In short, we find that the examiner has not set forth a prima facie of obviousness.

DECISION

The decision of the examiner rejecting claims 1 through 15 under 35 U.S.C. § 103 is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	
MICHAEL R. FLEMING)	BOARD OF PATENT
)	APPEALS AND

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Administrative Patent Judge)	INTERFERENCES
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)	
ANITA PELLMAN GROSS)	
Administrative Patent Judge)	

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KAY HOUSTON
TEXAS INSTRUMENTS, INC
PATENT DEPARTMENT MS 219
P.O. BOX 655474
DALLAS, TX 75265