

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ASHER T. MATSUDA

Appeal No. 96-4204
Application 08/148,307¹

ON BRIEF

Before KRASS, JERRY SMITH, and FLEMING, 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 1-20, which constitute all the claims in the application.

¹ Application for patent filed November 8, 1993.

The disclosed invention pertains to a planar semiconductor accelerometer sensor plate. Such a sensor plate is suspended in parallel between two capacitor plates. A force acting on the sensor plate causes it to accelerate in a direction towards one of the capacitor plates. The invention is particularly directed to a technique for preventing the sensor plate from bending when subjected to such forces. Specifically, the planar sensor plate has a first mass bounded by a plurality of constraint points and a second mass cantilevered from the first mass disposed outside the constraint points.

Representative claim 1 is reproduced as follows:

1. A planar semiconductor accelerometer sensor plate comprising:

a first mass of the sensor plate bounded by a plurality of constraint points, wherein the first mass is disposed inside the plurality of constraint points; and

a second mass of the sensor plate cantilevered from the first mass in order to produce a counterbalancing moment on the first mass, wherein the second mass is disposed outside the plurality of constraint points for restoring the sensor plate to a substantially planar condition in response to acceleration forces.

The examiner relies on the following references:

Albert	4,656,383	Apr. 07, 1987
Wiegand et al. (Wiegand)	4,930,042	May 29, 1990

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Claims 1-20 were finally rejected under the first paragraph of 35 U.S.C. § 112 as failing to provide an adequate written description of the invention. This rejection is not repeated in the examiner's answer and has apparently been withdrawn. Claims 1-4, 7-11, 14, 17 and 18 remain rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Albert. Claims 5, 15 and 20 remain rejected under 35 U.S.C. § 103 as unpatentable over the teachings of Albert taken alone. Finally, claims 6, 12, 13, 16 and 19 remain rejected under 35 U.S.C. § 103 as unpatentable over the teachings of Albert in view of Wiegand.

Rather than repeat the arguments of appellant 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 appellant's arguments set forth in the brief along with the

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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 Albert does not fully meet the invention as recited in claims 1-4, 7-11, 14, 17 and 18. We are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 5, 6, 12, 13, 15, 16, 19 and 20. Accordingly, we reverse.

We consider first the rejection of claims 1-4, 7-11, 14, 17 and 18 under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Albert. 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 Sys., 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).

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The examiner has attempted to read the claims on the disclosure of Albert on pages 3-4 of the answer. With respect to independent claim 1, appellant argues that the masses of Albert identified by the examiner as the first mass [30 or 32] and the second mass [34 or 36] are not part of a planar sensor plate as required by claim 1. The examiner responds that Albert meets this limitation since "the definition of 'plane' defined by the examiner is 'to be within the same region and/or area' wherein the transducer sensor have a two-dimensional characteristic" [answer, page 6].

Our first observation is that the examiner is not free to define a term of the claim in a manner which is inconsistent with the conventional meaning of the term and is also inconsistent with the definition of the term disclosed in an applicant's specification. An item is planar only if all points of the item exist in a single plane. This is the accepted definition of planar and the definition intended by appellant. As appellant points out, the masses of Albert identified by the examiner are not part of a planar sensor plate as required by claim 1. We note that the examiner has identified a portion of Albert which discusses that the masses can be selected so that the center of gravity of the masses will lie on the same plane as the vibratory

beam. The center of gravity being coplanar with the beam, however, is not the same as the masses being coplanar with the sensor plate as recited in claim 1. The masses of Albert are clearly not part of a planar sensor plate. Therefore, we do not sustain the rejection of claim 1 as anticipated by the disclosure of Albert.

With respect to independent claim 8, appellant argues that Albert does not teach the claimed semiconductor substrate and a planar sensor plate suspended between a first and a second capacitor plate [brief, pages 7-8]. The examiner responds that the transducer of Albert is made of piezoelectric material, quartz or metal and since quartz and semiconductors are both crystalline materials, the recitation of claim 8 is fully met. We do not agree.

Although a semiconductor material such as silicon or germanium is a crystalline material, not every crystalline material is a semiconductor. The examiner's conclusion that the quartz of Albert is a semiconductor substrate is untenable and defies accepted knowledge that quartz is not a semiconductor. The examiner's own supplied dictionary definition is that quartz is an oxide of silicon and such an oxide is known to be an insulating material and not a semiconductor. We note for the

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record that appellant's other arguments with respect to claim 8 are also correct and show error in the examiner's position. Therefore, we do not sustain the rejection of claim 8 as anticipated by the disclosure of Albert.

With respect to independent claim 18, appellant makes the same arguments previously made with respect to claims 1 and 8. Therefore, for reasons already discussed above, Albert does not anticipate the invention of claim 18 within the meaning of 35 U.S.C. § 102. Since none of the independent claims is fully met by Albert as discussed above, none of the dependent claims is fully met by Albert either. Therefore, we do not sustain the rejection under 35 U.S.C. § 102 of claims 1-4, 7-11, 14, 17 and 18.

With respect to the examiner's rejection of claims 5, 6, 12, 13, 15, 16, 19 and 20 under 35 U.S.C. § 103, the examiner's errors in interpreting the claim language and in evaluating the teachings of Albert render the examiner's § 103 rejections as being fatally deficient. There is nothing in Albert or Wiegand which compares to the claimed planar sensor plate having a first mass and a cantilevered second mass arranged about constraint points as recited in the claims on appeal. The examiner's misinterpretation of the claims and misreading of the prior art

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references have resulted in a failure to establish a prima facie case of the obviousness of the claims on appeal. Therefore, we do not sustain the rejection of the claims under 35 U.S.C. § 103.

In summary, we have not sustained the examiner's rejections of the claims under either 35 U.S.C. § 102 or § 103. Accordingly, the decision of the examiner rejecting claims 1-20 is reversed.

REVERSED

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