

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MING HWANG,
WILLIAM R. McKEE,
and
ROBERT BAUMANN

Appeal No. 1998-1096
Application No. 08/415,399

ON BRIEF

Before KRASS, RUGGIERO, and GROSS, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 5-10, all of the claims pending in the present application. Claims 1-4 have been canceled.

The claimed invention relates to the protection of integrated circuits from the effects of thermal neutrons which

Appeal No. 1998-1096
Application No. 08/415,399

can cause charge bursts and signal upsets. Appellants indicate at pages 2 and 3 of the specification that this protection takes the form of a thermal neutron absorbing layer provided either on the integrated circuit itself, or included on the walls of the integrated circuit container.

Claim 5 is illustrative of the invention and reads as follows:

5. An integrated circuit, comprising:

(a) a substrate containing devices at a surface;

(b) a layer containing thermal neutron absorbers

over said surface, said layer not packaging material, wherein said thermal neutron absorbers reduce incident thermal neutrons by a factor of about 2 or more.

The Examiner relies on the following prior art:

Cannella et al. (Cannella)	4,691,243	Sep. 01, 1987
Sugawara ¹	64-28952	Jan. 31, 1989
(Published Japanese Kokai Patent Application)		

Claims 8-10 stand finally rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite for failure to particularly point out and distinctly claim the invention.

¹A copy of a translation provided by the U.S. Patent & Trademark Office, March 1998, is included and relied upon for this decision.

Appeal No. 1998-1096
Application No. 08/415,399

Claims 5 and 6 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Cannella. Claims 8-10 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Sugawara. Claim 7 stands finally rejected under 35 U.S.C. § 103 as being unpatentable over Cannella in view of Sugawara.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief and Answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, the arguments in support of the rejections and the evidence of anticipation and obviousness relied upon by the Examiner as support for the prior art rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief 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 claims particularly point out the invention in a manner which complies with 35 U.S.C. § 112, second paragraph.

Appeal No. 1998-1096
Application No. 08/415,399

In addition, it is our opinion that the disclosure of Cannella does not fully meet the invention as recited in claims 5 and 6, nor does the disclosure of Sugawara meet the recited invention in claims 8-10. Finally, we are of the conclusion 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 claim 7. Accordingly, we reverse.

With respect to the 35 U.S.C. § 112, second paragraph rejection of claims 8-10, we note that the general rule is that a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-4 (Fed. Cir. 1984).

The Examiner questions the antecedent reference for the

Appeal No. 1998-1096
Application No. 08/415,399

language "and spaced from said walls . . ." in dependent claim 8, from which claims 9 and 10 further depend. After considering Appellants' response, we agree with Appellants that no ambiguity or lack of clarity exists in the claim recitation. In our view, it is apparent from Appellants' specification and Figure 5 of the drawing that the intended reference is to the integrated circuits since the thermal neutron absorber is included on the inside of the container walls and not spaced therefrom as are the integrated circuits. From the above discussion, it is our opinion that the skilled artisan, having considered the specification in its entirety, would have no difficulty ascertaining the scope of the invention recited in dependent claims 8-10. Therefore, the rejection of claims 8-10 under the second paragraph of 35 U.S.C. § 112 is not sustained.

We next consider the rejection of claims 5 and 6 under 35 U.S.C. § 102(b) as being anticipated by Cannella. 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

Appeal No. 1998-1096
Application No. 08/415,399

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 Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Appeal No. 1998-1096
Application No. 08/415,399

With respect to independent claim 5, the Examiner attempts to read the various claim limitations on the integrated circuit structure illustrated in Figure 8 of Cannella. In particular, the Examiner (Final Rejection, pages 2-3) points to static charge shielding layer 69 described at column 6, lines 33-60 of Cannella.

In response, Appellants assert that the Examiner has ignored the claim language ". . . reduce incident thermal neutrons by a factor of about 2 or more," improperly dismissing such language as a statement of intended use, inherent property or function. After reviewing the arguments of record, we are in agreement with Appellants' position as stated in the Brief. We find the Examiner's assertion that the language in question can be disregarded when determining patentability to be unfounded. Our reviewing courts have held that, in assessing patentability of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 983-84, 180 USPQ 580, 582 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA

Appeal No. 1998-1096
Application No. 08/415,399

1970). Here, the language "reduce incident thermal neutrons by a factor of about 2 or more" limits the structure of the thermal neutron absorbing layer since, as disclosed in Appellants' specification, the amount of thermal neutrons incident on the absorbing layer is a function of layer thickness, and the thermal absorption quality of the layer material. Since the Examiner has chosen to ignore the claimed particular reduction factor, no showing on the record exists as to how Cannella's shielding layer, which is used in a scanning mechanism and is designed to be transparent, would meet the requirements of claim 5.

In view of the above discussion, it is our opinion that, since all of the claim limitations are not present in the disclosure of Cannella, the Examiner's 35 U.S.C. § 102(b) rejection of independent claim 5, as well as claim 6 dependent thereon, can not be sustained.²

²In the "Response to arguments" portion at page 4 of the Answer, the Examiner asserts the indefiniteness of the claim language ". . . of about 2 or more." Since no rejection has been made of record by the Examiner, we decline to rule on the merits of the Examiner's contention. We do note, however, that the breadth of a term should not be equated with indefiniteness. In re Miller, 441 F.2d 689, 693, 169 USPQ 597, 600 (CCPA 1971).

Appeal No. 1998-1096
Application No. 08/415,399

Turning to a consideration of the 35 U.S.C. § 102(b) rejection of claims 8-10 as being anticipated by Sugawara, we reverse this rejection as well for the same reasons discussed supra. In addressing independent claim 8, the Examiner again has improperly dismissed the absorption reduction factor claim language which is identical to that in claim 1. As with the Cannella reference discussed supra, the Examiner has provided no indication as to how Sugawara's conductive film layer would meet the requirements of claim 8.

As a final consideration, we turn to the Examiner's 35 U.S.C. § 103 rejection of dependent claim 7 as being unpatentable over Cannella in view of Sugawara. The Examiner, as the basis for the obviousness rejection, proposes a combination of Sugawara with Cannella to address the "packaging material" limitation of claim 7. Claim 7, by virtue of its ultimate dependence on independent claim 5, contains all of the limitations of claim 5. From our earlier discussion, however, it is apparent that the Examiner has not established a prima facie case of obviousness with respect to claim 7 since neither Cannella nor Sugawara teaches or suggests the claimed absorption reduction factor. Therefore,

Appeal No. 1998-1096
Application No. 08/415,399

the Examiner's 35 U.S.C.

§ 103 rejection of claim 7 is not sustained.

Appeal No. 1998-1096
Application No. 08/415,399

In conclusion, we have not sustained the Examiner's 35 U.S.C. § 102(b) rejection of claims 5, 6 and 8-10, nor the 35 U.S.C. § 103 rejection of claim 7. Accordingly, the Examiner's decision to reject claims 5-10 is reversed.

REVERSED

)	
ERROL A. KRASS))
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
ANITA PELLMAN GROSS))
Administrative Patent Judge)	

JFR:hh

Appeal No. 1998-1096
Application No. 08/415,399

Carlton H. Hoel
Texas Instruments, Inc.
P.O. Box 655474 M/S 219
Dallas, TX 75265