

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

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte Scott A. Hareland and Sunit Tyagi

Appeal No. 2005-2695
Application No. 10/280,926

ON BRIEF

Before THOMAS, RUGGIERO, and DIXON, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 7-12, and 16-29, which are all of the claims pending in this application.

We AFFIRM.

BACKGROUND

Appellants' invention relates to a compact input/output signal driver for electrostatic discharge protection. An understanding of the invention can be derived from a reading of exemplary claims 7 and 19, which are reproduced below.

7. A method comprising:

forming an electrode over a substrate;

forming a lateral diode including said electrode and opposed regions of opposite conductivity type in said substrate, said regions being opposed from one another across said electrode;

forming a transistor using said electrode as the gate of said transistor; and

fabricating an input/output signal driver with electrostatic discharge protection using said diode and transistor.

19. A method comprising:

forming a first C-shaped electrode;

using said first C-shaped electrode as a mask to form a lateral diode having a pair of opposed regions across said electrode, said regions being of opposite conductivity type;

using said first C-shaped electrode as a mask to form the source and drain of a transistor, said electrode to act as a gate of said transistor; and

fabricating an input/output signal driver with electrostatic discharge protection using said diode and transistor.

Appeal No. 2005-2695
Application No. 10/280,926

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Dingwall	4,571,816	Feb. 25, 1986
Kim	5,895,940	April 20, 1999

Claims 17-29 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.¹ The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time of the application was filed, had possession of the claimed invention. Claims 7-12, 16-18, and 21-24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention. Claims 7-12 stand rejected under 35 U.S.C. § 102 as being anticipated by Kim. Claims 16-29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kim in view of Dingwall.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the answer (mailed Mar. 31, 2005) for the examiner's reasoning in support of the rejections, and to

¹ In light of our following discussion with respect to the written description requirement, we leave it to the examiner's consideration of also entering a rejection under a lack of enablement requirement.

Appeal No. 2005-2695
Application No. 10/280,926

the brief (filed Dec. 20, 2004) and reply brief (filed Apr. 28, 2005) for appellants' arguments there against.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Only those arguments actually made by appellants have been considered in this decision. Arguments that appellants could have made but chose not to make in the brief have not been considered. We deem such arguments to be waived by appellants [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

35 U.S.C. § 112, First Paragraph

The written description inquiry is a factual one and must be assessed on a case-by-case basis. **See Vas-Cath Inc. v. Mahurkar**, 935 F.2d 1555, 1562, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991) (quoting **In re Smith**, 458 F.2d 1389, 1395, 173 USPQ 679, 683 (CCPA 1972) ("Precisely how close the original description must come to comply with the description requirement of § 112 must be determined on a

Appeal No. 2005-2695
Application No. 10/280,926

case-by-case basis.”)). In order to satisfy the written description requirement, the disclosure as originally filed does not have to provide in **haec verba** support for the claimed subject matter at issue. **See Fujikawa v. Wattanasin**, 93 F.3d 1559, 1570, 39 USPQ2d 1895, 1904 (Fed. Cir. 1996). Nonetheless, the disclosure must convey with reasonable clarity to those skilled in the art that the inventor was in possession of the invention, **Vas-Cath Inc.**, 935 F.2d at 1563-64, 19 USPQ2d at 1116-17. One skilled in the art, reading the original disclosure, must reasonably discern the limitation at issue in the claims. **Waldemar Link GmbH & Co. v. Osteonics Corp.**, 32 F.3d 556, 558, 31 UPSQ2d 1855, 1857 (Fed. Cir. 1994).

Whether a claim is enabled under 35 U.S.C. § 112, first paragraph is a question of law, although based upon underlying factual findings. **See PPG Indus., Inc. v. Guardian Indus. Corp.**, 75 F.3d 1558, 1564, 37 USPQ2d 1618, 1623 (Fed. Cir. 1996); **In re Goodman**, 11 F.3d 1046, 1050, 29 USPQ2d 2010, 2013 (Fed. Cir. 1993). **In re Robertson**, 169 F.3d at 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (recognizing that extrinsic evidence may be required to establish inherency).

The purpose of the enablement requirement is to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” **Nat’l Recovery Techs., Inc. v. Magnetic Separation**

Appeal No. 2005-2695
Application No. 10/280,926

Sys., 166 F.3d 1190, 1196, 49 USPQ2d 1671, 1675 (Fed. Cir. 1999). One of our predecessor courts has held the enablement and written description requirements to be separate and distinct, and has held that a “specification may contain a disclosure that is sufficient to enable one skilled in the art to make and use the invention and yet fail to comply with the description of the invention requirement.” **In re Barker**, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977).

Also springing from these same underlying factual predicates is the § 112, second paragraph, definiteness requirement. This requirement is distinct from the enablement and description requirements, which arise from § 112, first paragraph. [D]efiniteness and enablement are analytically distinct requirements, even though both concepts are contained in 35 U.S.C. § 112. The definiteness requirement of 35 U.S.C. § 112, ¶ 2 is a legal requirement, based on the court’s role as construer of patent claims...Definiteness requires the language of the claim to set forth clearly the domain over which the applicant seeks exclusive rights.... The test for whether a claim meets the definiteness requirement is “whether one skilled in the art would understand the bounds of the claim when read in light of the specification.”

Process Control Corp. V. Hydreclaim Corp., 190 F.3d 1350, 1358, 52 USPQ2d 1029, 1034 (internal citations omitted). **See also** 3 Donald S. Chisum, Chisum on Patents,

Appeal No. 2005-2695
Application No. 10/280,926

§ 8.03 at 8-14 (2001) (noting the difference between the requirements of “definiteness, which claims must meet, from the requirements of enablement, which the disclosures of the specification must meet”).

From our study of the instant specification, we find that the written description is overly concise wherein we agree with the examiner that the written description of the invention does not evidence that appellants were in possession of the claimed invention at the time of the invention. We find no discussion of the use of the electrodes as a mask or that the process employed is a self aligned process. We find no citation of a teaching in the NINE lines of argument in the brief with respect to dependent claim 17 and TWO lines of argument in the brief with respect to independent claim 19. Appellants cite to lines 3-10 on page 6 of the specification. We find no express or clear implied teaching of the use of an electrode as a mask at the indicated locations.

We find that the examiner essentially repeats the statement of the rejection in the Answer made previously in the Final Rejection and then appellants further argue the merits of the rejections in the Reply Brief. We find appellants’ arguments to be untimely since the examiner has not changed the rejection or the arguments, but for completeness we will address the merits of appellants’ arguments in the reply brief.

Appellants argue that the same words need not used in the claims as in the specification. (Reply Brief at page 2.) While we agree with appellants, appellants must

still have support for the claimed subject matter in the written description. We find that appellants have not shown support for the use of the electrodes as a mask or the well known self-aligned technology. (Reply Brief at page 3.) Appellants argue that anyone skilled in the art would be familiar with the well known self-aligned technology wherein the gate electrode is utilized as a mask for ion implantation and that anyone [not even a skilled artisan] who has ever used a mask in painting would understand that anything that is already in position on a substrate would act as a mask in an ensuing coating/exposure process such as ion implantation. (Reply Brief at page 3.) We disagree with appellants' conclusion and reliance on the knowledge of the skilled artisan to remedy the deficiency in the instant specification. From our review of the portions of the specification cited by appellants, we cannot agree with appellants that the specification or the drawings clearly show a self-aligned process or technology. Appellants argue that Figure 7 shows that the N and P regions are "precisely self-aligned." (Reply Brief at page 3.) Appellants repeatedly cite to brief portions of the specification which we have found to be unresponsive of the use of the electrodes as a mask and appellants maintain that the examiner's assertions are baseless. (Reply Brief at page 4.) We cannot agree with appellants and find that the attorney arguments are not persuasive and that the repeated recitation to the portions of the specification which do not clearly or even impliedly support these assertions does not strengthen appellants

case. Since we find that the examiner has identified those portions of the claimed invention which are not disclosed in the written disclosure and explained what is lacking in the written description, we find that the examiner has established a ***prima facie*** case of a lack of written description. From our study of the specification and appellants' arguments, we agree with the examiner's finding and find that appellants have not shown error therein or adequately rebutted the ***prima facie*** case of a lack of written description by showing that the claimed invention is disclosed in the written description.

Additionally, we add that from our study of the specification and appellants' arguments it is inescapable that the instant specification is overly concise and that the specification does not contain "a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." (35 U.S.C. § 112, First Paragraph.) We find that the written description is overly "concise," and that the terms of the description are not "clear," not "full" and not "exact" so as to enable any person skilled in the art to make and use the invention. We leave it to the examiner to perform his own evaluation and make a rejection as deemed appropriate.

35 U.S.C. § 112, Second Paragraph

We consider next the Examiner's 35 U.S.C. § 112, second paragraph, rejection of claims 7-12 as failing to particularly point out and distinctly claim the invention. 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, 574 (Fed. Cir. 1984).

The examiner sets forth the claim language which is found to lack that reasonable degree of precision and particularity when read in light of the overly concise specification discussed above. (Answer at page 4-5.) Appellants summarily responds to the examiner's **prima facie** case by stating "[p]lainly it does" and "clearly it does", "the claim means exactly what it says" and "there is nothing unclear about the claim" (Brief at page 11.) We find these arguments to clearly lack substance or merit. Just as summarily, we find these unsupported arguments to be unpersuasive of error by the examiner. As with the above discussion of written description, appellants finally submit

substantive arguments in the reply brief even though the statement of the rejection has not changed. Here, we find the arguments in the reply brief to be untimely, but for completeness, we will address them.

The examiner maintains that it is unclear how a lateral diode is “formed” since a P+ and a N+ layer of diode 106 which are not in direct contact with each other and how a lateral diode (a PN junction) can “include” an electrode as recited in claim 7 and how an electrode can “define” a lateral diode as recited in claims 8 and 21. (Answer at pages 4-5.) Appellants argue in the reply brief at page 2 that “the electrode may be defined as part of the diode to make it clear how the opposed regions of the opposite conductivity type are situated relative to that electrode.” We find no discussion in the language of independent claim 7 of the relative positioning of the regions. Therefore, this argument is not persuasive since it is not commensurate in scope with the recited (or disclosed) claim limitations. We agree with the examiner that the step of forming a lateral diode including the electrode does not distinctly claim the invention. Therefore, we will sustain the examiner rejection of independent claim 7 and its dependent claims.

With respect to the examiner rejection of claims 8 and 21, appellants have not addressed the argument as to how the second lateral diode is “defined” and how a second transistor is defined using a second electrode. (Answer at page 5.) We agree

Appeal No. 2005-2695
Application No. 10/280,926

with the examiner as discussed above and find no persuasive argument by appellants to rebut the *prima facie* case of indefiniteness.

35 U.S.C. § 102

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), **cert. denied**, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in **Kalman v. Kimberly-Clark Corp.**, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), **cert. denied**, 465 U.S. 1026 (1984), it is only necessary for the claims to “‘read on’ something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or ‘fully met’ by it.” While all elements of the claimed invention must appear in a single reference, additional references may be used to interpret the anticipating reference and to shed light on its meaning, particularly to those skilled in the art at the relevant time. **See Studiengesellschaft Kohle m.b.H. v. Dart Indus.**, Inc., 726 F.2d 724, 726-727, 220 USPQ 841, 842-843 (Fed. Cir. 1984).

The examiner maintains that Kim teaches the claimed invention and that Kim teaches that the regions of opposing conductivity are across the electrode. The examiner maintains that the regions are 34 and 32 (or 54 and 52). We cannot agree with the examiner and find that figures 1-3 of Kim teach the same conductivity type across the electrode and the examiner has not clearly established how the teachings of Kim teach the recited limitations of independent claim 7. From the express teaching of Kim, we cannot agree with the examiner that Kim teaches a PN junction across the electrode. Therefore, we find that the examiner has not established a **prima facie** case of anticipation, and we cannot sustain the rejection of claim 7 and its dependent claims 8-12.

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a **prima facie** case of obviousness. **See In re Rijckaert**, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A **prima facie** case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. **See In re Lintner**, 458 F.2d

Appeal No. 2005-2695
Application No. 10/280,926

1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. **See In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. **See In re Warner**, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), **cert. denied**, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. **See, e.g., Grain Processing Corp. v. American Maize-Prods. Co.**, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, “the [E]xaminer can satisfy the burden of showing obviousness of the combination ‘only by showing some objective teaching in

the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.” **In re Lee**, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing **In re Fritch**, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). “Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence.’” **In re Dembiczak**, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). “Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact.” **Id.**, 175 F.3d at 999-1000, 50 USPQ2d at 1617, citing **McElmurry v. Arkansas Power & Light Co.**, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

Further, as pointed out by our reviewing court, we must first determine the scope of the claim. “[T]he name of the game is the claim.” **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Therefore, we look to the limitations of independent claim 19 and 26. Here, we find that the examiner has not identified how the teachings of Dingwall remedy the above noted deficiency in Kim. Therefore, we find that the examiner has not established a *prima facie* case of obviousness using the combination of Kim and Dingwall, and we cannot sustain the rejection of independent claims 19 and 26 and their respective dependent claims.

Appeal No. 2005-2695
Application No. 10/280,926

Similarly, we do not find that the examiner has established a *prima facie* case of obviousness of dependent claims 16-18 for the reasons set forth above with respect to independent claim 7.

CONCLUSION

To summarize, the decision of the examiner to reject claims 17-29 under 35 U.S.C. § 112, first paragraph is affirmed, the decision of the examiner to reject claims 7-12, 16-18 and 21-24 under 35 U.S.C. § 112, second paragraph is affirmed, the decision of the examiner to reject claims 7-12 under 35 U.S.C. § 102 is reversed, and the decision of the examiner to reject claims 16-29 under 35 U.S.C. § 103 is reversed.

Appeal No. 2005-2695
Application No. 10/280,926

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

AFFIRMED

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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Appeal No. 2005-2695
Application No. 10/280,926

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