

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROSHI SEKII and KOICHI IMANAKA

Appeal No. 96-1763
Application No. 08/056,941¹

HEARD: April 7, 1999

Before THOMAS, DIXON and FRAHM, **Administrative Patent Judges.**

DIXON, **Administrative Patent Judge.**

DECISION ON APPEAL

¹ Application for patent filed May 5, 1993. According to appellants, this application is a continuation of Application No. 07/653,271, filed February 11, 1991, now abandoned.

This is a decision on appeal from the Examiner's final rejection of claims 1, 2 and 5-12, which are all of the claims pending in this application.²

BACKGROUND

The present invention relates to a semiconductor element having a plurality of layers as set forth in claim 1 below. The semiconductor forms a stripe laser.

Appellants have indicated that claims 1, 2 and 5-12 do not stand or fall together and provides argument thereto. (See brief³ at pages 3-4.)

Independent claim 1 is representative of the invention and reproduced as follows:

1. A semiconductor element comprising:

a substrate of a first conductivity type;

a lower cladding layer of said first conductivity type on said substrate;

an active layer on said lower cladding layer;

an upper cladding layer of a second conductivity type on said active layer;

a blocking layer of said first conductivity type on said upper cladding layer;

a cap layer of said second conductivity type on said blocking layer;

² Claims 4, 13 and 14 are directed to non-elected claims which were restricted.

³ Appellants filed an appeal brief on May 18, 1995 (Paper No. 24). We will refer to this appeal brief as simply the brief. Appellants filed a reply brief on October 10, 1995 (Paper No. 26). We will refer to this reply brief as simply the reply.

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an area for a current path of said second conductivity type formed in a portion of said cap layer and extending from said cap layer to said upper cladding layer, wherein said area for a current path is an area containing impurities at a concentration different from said cap layer; and

an ohmic contact electrode covering substantially an entire upper surface of said cap layer.

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

Dixon et al. (Dixon)	4,124,826	Nov. 7, 1978
Marschall et al. (Marschall)	4,359,775	Nov. 16, 1982
Noda et al. (Noda)	4,847,844	Jul. 11, 1989
Kobayashi	4,941,146	Jul. 10, 1990
		(filed Jun. 28, 1989)

Claims 1, 5, 6 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kobayashi in view of Marschall and Dixon. Claims 1, 2 and 5-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kobayashi in view of Marschall, Dixon and Noda.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the appellants, we make reference to the briefs and answers⁴ for the details thereto.

⁴ The Examiner responded to the brief with an examiner's answer mailed August 8, 1995, (Paper No. 19). We will refer to this examiner's answer as simply the answer. The Examiner responded to the reply with a supplemental examiner's answer mailed December 27, 1995, (Paper No. 27).

OPINION

After a careful review of the evidence before us, we disagree with the Examiner that claims 1, 2 and 5-12 are properly rejected under 35 U.S.C. § 103, and we will not sustain the rejection of claims 1, 2 and 5-12.

As a consequence of our review, we make the determinations which follow.

Rejection of Claims 1, 5, 6 and 11 under 35 U.S.C. § 103

Turning to the rejection of independent claim 1, we find that the examiner has not met the burden of setting forth a *prima facie* case of obviousness in rejecting claim 1. 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). Claim 1 sets forth a specific structure of interrelated layers of a semiconductor element. After a complete review of the administrative proceedings and the references applied against the claims, we find that the Examiner has not set forth a *prima facie* case of obviousness, nor has the Examiner clearly set forth a convincing line of reasoning as to why it would have been obvious to one of ordinary skill in the art at the time of the invention to modify and/or combine the referenced teachings in a manner to meet the limitations of the claimed invention.

The Examiner sets forth the rejection of claims 1, 5, 6 and 11 and states that "it is desirable to have the effective contact area much larger than the active stripe, and on a low resistivity region, for better current flow, and for this a buried blocking layer is desirable, with the contact over the whole top surface." (See answer at page 4.) From the teaching of Dixon, the Examiner then continues to conclude that the combination of Kobayashi, Marschall and Dixon would have been modified to have the stripe more heavily doped than the cap and N type blocking layer. (See answer at page 5.) Appellants have argued the lack of reasoning by the Examiner in the combination of the teachings. (See brief at pages 6-7.) We agree with the appellants that the Examiner has not adequately set forth a line of reasoning for the combination of the teachings. The Examiner sets forth that all of the references are directed to stripe lasers, therefore the combination of teachings would have been obvious because "[a]ll references, of course, are 'closely related in the same art', double-heterojunction semiconductor injection lasers with buried blocking layers for current confinement." (See answer at page 6.) The mere fact that the references are "all closely related" is not per se a proper motivation to combine various disparate parts from each reference as the Examiner has impliedly asserted.

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The Examiner disregards the arguments by appellants by stating that they are "pro-forma," etc., rather than clearly setting forth the factual basis and reasoning for the Examiner's contrary positions. (See answer at pages 6-10 and entire supplemental answer.) Appellants have argued that the Examiner has not provided a proper motivation to combine the teachings of the references applied against the claims. We agree. Furthermore, we conclude that the combination does not teach the claimed subject matter as asserted by the Examiner in the final rejection, the answer and the supplemental answer. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. **See In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). We cannot determine from the answer or the supplemental answer, the propriety of the Examiner's position based on the factual basis set forth by the Examiner regarding the rejection of the claims apart from the mere conclusions espoused by the Examiner. Therefore, we hold that the Examiner has not met the initial burden of establishing a *prima facie* case of obviousness. **See In re Rijckaert**, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

Since all the limitations of independent claim 1 are neither taught nor suggested by the applied prior art, we cannot sustain the Examiner's rejection of appealed claim 1

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under 35 U.S.C. § 103. Therefore, we cannot sustain the rejection of claims 5, 6 and 11 which depend from claim 1.

**Rejection of Claims 1, 2 and 5-12
under 35 U.S.C. § 103**

Claim 2 is directed to the same basic invention as claimed in claim 1, but adds a field of use limitation that the semiconductor is a luminous element and that a window is present over the area for current path to allow light to exit.

As stated above, the Examiner has not provided a convincing line of reasoning for the combination of Kobayashi, Marschall and Dixon. Similarly, the Examiner has not set forth proper motivation for the addition of the Noda patent to the combination of Kobayashi, Marschall and Dixon. Furthermore, Noda does not supply the missing motivation to modify the combination of Kobayashi, Marschall and Dixon; therefore, the rejections of claims 1 and 2 do not set forth a *prima facie* case of obviousness, as discussed above.

Since all the limitations of independent claims 1 and 2 are neither taught nor fairly suggested by the applied prior art, we cannot sustain the Examiner's rejection of appealed claims 5-12, which depend therefrom, under 35 U.S.C. § 103.

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CONCLUSION

To summarize, the decision of the Examiner rejecting claims 1, 2 and 5-12 under 35 U.S.C. § 103 is reversed. The decision of the Examiner is reversed.

REVERSED

JAMES D. THOMAS)	
Administrative Patent Judge)	
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JOSEPH L. DIXON)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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ERIC S. FRAHM)	
Administrative Patent Judge)	

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