

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HWA CHENG,
JAMES M. DePUYDT,
MICHAEL A. HAASE, and
JUN QIU

Appeal No. 96-3592
Application 08/381,335¹

ON BRIEF

Before URYNOWICZ, THOMAS, and TORCZON, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

¹ Application for patent filed January 31, 1995. According to appellants, the application is a division of Application 08/139,614, filed October 20, 1993, now Patent No. 5,395,791; which is a continuation of Application 07/887,541, filed May 22, 1992, now abandoned.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 18 through 30, which constitute all the claims in the application.

Representative claim 18 is reproduced below:

18. A II-VI compound semiconductor electroluminescent device including:

a plurality of layers of II-VI semiconductor forming a pn junction;

a short-period strained-layer superlattice (SPSLS) active layer within the pn junction, the SPSLS layer including a plurality of overlaying single crystal thickness layers of elements and having a form described by the notation $((X)_m(Y)_n)_p$, where X and Y are binary II-VI semiconductor compounds and m, n and p are integers;

a substrate for supporting the layers of II-VI semiconductor; and

first and second electrodes for coupling electrical energy to the device.

The following reference is relied on by the examiner:

Jeon et al. (Jeon), "Blue and green diode lasers in ZnSe-based quantum wells," Applied Physics Letters, Vol. 60, no. 17, pp. 2045-47 (April 27, 1992)

Claims 18 to 30 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Jeon alone.

Rather than repeat the positions of the appellants and the examiner, reference is made to the briefs and the answers for the respective details thereof.

OPINION

We reverse the rejection of claims 18 through 30 under 35 U.S.C. § 103.

Each independent claim 18, 23, and 30 on appeal in some manner recites that "the SPSLS layer" includes "a plurality of overlaying single crystal thickness layers." The examiner appears not to have come to grips with this limitation until the supplemental answer. The single crystal thickness feature is consistent with the manner in which the specification discloses the claimed and shown invention in Figures 1 and 4. Our study of the Jeon publication relied upon alone by the examiner under 35 U.S.C. § 103 leads us to conclude that there is no discussion per se that the multilayer heterostructure of the blue and green diode lasers in this reference are comprised of the claimed "a plurality of overlaying single crystal thickness layers." The examiner does not argue any modification of the reference nor do we discern any teaching or suggestion to do so from the artisan's perspective to arrive at the noted feature of each independent claim on appeal. As such, we must reverse the rejection of each independent claim 18, 23, and 30 on appeal and therefore each respective dependent claim.²

² It appears to us that an objection may lie as to the inclusion of dependent claim 22/18 among the claims on appeal under 37 CFR § 1.75(b) inasmuch as the allowance of claim 22/18 would present substantially the same subject matter as independent claim 23 on appeal thus presenting substantially duplicate claims.

As a final matter, we note the examiner's observations at the top of page 3 of the answer with respect to the use of the brackets in dependent claim 21. It appears that each of the other claims on appeal have not utilized a bracket as a part of the generalized notation of the elements. Although the disclosure utilizes the brackets, each of the claims on appeal except claim 21 does not so utilize brackets but utilizes instead double parentheses. For consistency purposes as well as to avoid any potential conflict with conventional claim amendment practice regarding brackets, it appears advisable that claim 21 be amended.

In view of the foregoing, the decision of the examiner rejecting claims 18 through 30 under 35 U.S.C. § 103 is reversed.

REVERSED

STANLEY M. URYNOWICZ, JR.
Administrative Patent Judge

JAMES D. THOMAS
Administrative Patent Judge

RICHARD TORCZON
Administrative Patent Judge

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