

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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 RICHARD A. FAUST JR., QING-TANG JIANG
and JIONG-PING LU

Appeal No. 2005-0168
Application No. 10/138,393

ON BRIEF

Before KIMLIN, GARRIS and WARREN, Administrative Patent Judges.
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-5, 11 and 13-24. Claims 6-10 and 12 have been allowed by the examiner.

Claim 1 is illustrative:

1. A method for improving adhesion between layers, comprising:

forming a via in a substrate layer;

forming a barrier layer on the substrate layer in the via;

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§ 102. Accordingly, we will not sustain the examiner's rejections.

Although Shue describes a silicon-containing layer 27 and a copper-containing seed layer 50 on barrier layer 16, the examiner improperly concludes that Shue describes a single seed layer comprising first and second materials on the barrier layer. However, the examiner appreciates that Shue does not describe a single seed layer comprising the first and second materials by citing "seed layers 27 and 50" of Shue's Figure 5 (page 4 of Answer, second paragraph). While the examiner "maintains that layer 27, a silicon doping layer, anticipates the first layer of the seed layer" (id.), the examiner is apparently operating on the mistaken assumption that appellants claim two seed layers rather than a single seed layer comprising two materials.

The examiner goes on to say that layer 27 of Shue is part of the seed layer. However, Shue specifically discloses that layer 27 is a silated barrier region, and not part of the seed layer 50. While it might be argued that layer 27 of Shue functions as a silicon-containing seed layer, there is no basis for concluding that layers 27 and 50 of Shue comprise a single seed layer, as required by the appealed claims.

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The examiner poses the question "[w]hy would appellant's claim 1 seed layer with two distinguishable layers be distinguished from Shue?" (page 4 of Answer, last paragraph). However, appellants' claim 1 recites only a single seed layer, not two distinguishable layers.

The examiner also queries "what then would keep the bottom portion of layer 50 from satisfying the requirement?" (page 5 of Answer, first paragraph). However, layer 50 of Shue fails to meet the requirements of the claimed seed layer inasmuch as it does not contain a first and second material.

Since the examiner's § 103 rejection of claim 18 rests upon the same rationale applied to the § 102 rejection, it must also fall.

As a final point, upon return of this application to the examiner, the examiner has the opportunity of assessing the obviousness under 35 U.S.C. § 103 of formulating a single seed layer, containing silicon and copper, from separate layers 27 and 50 of Shue.

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In conclusion, based on the foregoing, the examiner's
decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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BRADLEY R. GARRIS)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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CHARLES F. WARREN)	
Administrative Patent Judge)	

ECK:clm

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