

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GONZALO AMADOR and ROGER J. STIERMAN

Appeal No. 2005-0767
Application No. 09/817,694

ON BRIEF

Before KIMLIN, DELMENDO and PAWLIKOWSKI, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-5, 12, 16 and 17. Claims 13-15 and 18-21 have been withdrawn from consideration. Claim 1 is illustrative:

1. A method for controlled electroless plating of uniform metal layers onto exposed metallizations in integrated circuits positioned on the active surface of semiconductor wafers, comprising the steps of:

maintaining a plurality of said wafers approximately parallel to each other at predetermined distances by supporting an edge of each said wafers between a plurality of support means;

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immersing said wafers into an electroless plating solution flowing in laminar motion at constant speed substantially parallel to said active surface of said wafers;

rotating each of said wafers at constant speed and synchronously with each other by turning each of said plurality of support means; and

creating periodic relative motion in changing directions between said plating solution and said wafers, thereby uniformly plating layers onto said exposed metallizations by controlled electroless deposition.

The examiner relies upon the following reference in the rejection of the appealed claims:

Shacham-Diamand et al. (Shacham-Diamand)	5,830,805	Nov. 3, 1998
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Appellants' claimed invention is directed to a method for the controlled electroless plating of uniform metal layers onto exposed metallizations in integrated circuits. The method entails, inter alia, using a plurality of support means to maintain a plurality of wafers parallel to each other when immersed into an electroless plating solution. The wafers are rotated at a constant speed by turning each of the plurality of support means, and relative periodic motion in changing directions is created between the plating solution and the wafers to effect uniform plating.

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Appealed claims 1-5, 12 and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Shacham-Diamand.¹

Appellants submit at page 3 of the Brief that "[c]laims 1-5, 12, 16, and 17 stand or fall together." Accordingly, even though the Argument section of appellants' Brief includes a discussion of claims 2, 12 and 16, the examiner has properly concluded that claims 1-5, 12, 16 and 17 stand or fall together. Accordingly, we will limit our consideration to the examiner's rejection of claim 1.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we concur with the examiner that the claimed subject matter is described in the prior art within the meaning of § 102. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the Answer.

Appellants do not dispute the examiner's factual determination that Shacham-Diamand, like appellants, describes a method for the controlled electroless plating of uniform metal layers onto exposed metallizations in integrated circuits by

¹ Although the examiner's statement of the rejection at page 3 of the Answer does not include claim 17, it is clear from the examiner's discussion of the rejection and from appellants' Brief that claim 17 stands rejected along with claims 1-5, 12, and 16. Also, we note that page 1 of the Final Rejection, paragraph 6, lists claim 17 as finally rejected.

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immersing into an electroless plating solution a plurality of semiconductor wafers that are positioned parallel to each other. Also, appellants do not contest the examiner's finding that Shacham-Diamand describes the claimed rotating of the wafers at a constant speed and creating periodic relative motion in changing directions between the plating solution and the wafers. It is appellants' singular contention that holder 226 of Shacham-Diamand does not meet the claimed requirement for "a plurality of support means." Appellants maintain that Figure 5 of the reference does not show sufficient detail and that "[h]older 226 appears to be a unified structure and is thus not 'a plurality of support means'" (page 3 of Brief, third paragraph).

We agree with the examiner that the appearance of reference holder 226 as a unified structure does not disqualify it as comprising a plurality of support means. See Sentry Protection Products, Inc. & Hero Products, Inc. v. Eagle Mfg. Co., (CAFC, 04-1392, 3/11/2005). Appellants have pointed to no definition in their specification that would preclude the claimed plurality of support means being a unified structure. In our view, the fact that holder 226 of Shacham-Diamand is described as supporting a plurality of wafers necessarily results in holder

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226, by definition, having the same function and equivalent structure as the plurality of support means presently claimed and disclosed in appellants' specification. Manifestly, in order for holder 226 of the reference to support a plurality of wafers, it must comprise a plurality of support means for the wafers.

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

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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ROMULO H. DELMENDO)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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