

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WALID A. ATIA, STEVEN D. CONOVER,  
ERIC E. FITCH, SEAN P. O'CONNOR, and  
RANDAL A. MURDZA

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Appeal No. 2005-2754  
Application No. 10/391,835

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ON BRIEF

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Before FRANKFORT, CRAWFORD, and BAHR, Administrative Patent Judges.  
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claim 1, the only claim remaining in the application. Claim 2 has been canceled.

Appellants' invention relates to an unpopulated optical bench precursor structure used to accurately position and secure optical components during fabrication of a component package. Claim 1 reads as follows:

1. An unpopulated optical bench precursor structure

comprising:  
a bench;  
solder pads deposited on the bench at locations determined by engagement points between optical components and the optical bench;  
spacers on the bench, in or near the solder pads, for supporting the optical components at predetermined positions vertically on the bench; and  
a removable template for facilitating the placement of optical components on the bench.

The prior art references relied upon by the examiner in rejecting the appealed claim are:

LoVasco et al. (LoVasco) 4,878,611 Nov. 7, 1989

Silhavy 6,375,060 Apr. 23, 2002  
(filed July 19, 2000)

In addition, the examiner has relied upon appellants' admitted prior art (AAPA) set forth on page 1 of the specification under the heading "Background of the Invention."

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of LoVasco and Silhavy.

Rather than attempt to reiterate the examiner's commentary with regard to the above-noted rejection and the conflicting viewpoints advanced by appellants and the examiner regarding that rejection, we make reference to the answer (mailed December 16, 2004) for the examiner's reasoning in support of the rejection, and to appellants'

brief (filed November 22, 2004) and reply brief (filed February 15, 2005) for the arguments thereagainst.

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 have made the determination which follows.

For the reasons set forth on pages 3-7 of the answer, the examiner has concluded that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention, based on the collective teachings of the AAPA, LoVasco and Silhavy, to modify an unpopulated optical bench precursor structure like that used to facilitate the solder self-alignment process for optical components as described on page 1 of the specification (AAPA) by providing spacers and fixtures on the known optical bench structure near the solder pads for permitting vertical and lateral positioning alignment of the optical components with respect to the bench during solder reflow as generally taught by LoVasco (e.g., Fig. 21) and to further utilize a removable template like that seen at (59) of Silhavy as a substitute for the lateral alignment fixture (2131) of

LoVasco to provide a reusable alignment tool for optical components, while allowing for a more simplified bench structure. We agree.

Appellants' argument that the prior art does not expressly show, teach or suggest that spacers and a removable template should be used for "optical component" positioning on an optical bench is noted, but for the reasons set forth by the examiner on pages 5 and 6 of the answer is not persuasive. Moreover, for the reasons set forth in the answer on pages 6 and 7, appellants' assertion that Silhavy does not suggest a "removable" template is likewise not persuasive.

From our perspective the discussions in LoVasco and Silhavy concerning the importance of controlling solder joint geometry by providing spacers and lateral alignment fixtures during a solder reflow process and providing solder joints without using flux are applicable to the joining of semiconductor chips as well as optical components to bench or package substrate structures like those acknowledged by appellants on page 1 of the specification to exist in the prior art. We do not see any reason why an unpopulated bench precursor structure for use with semiconductor electronic chips would necessarily be different from an unpopulated bench precursor structure used for the structural

Appeal No. 2005-2754  
Application No. 10/391,835

and electronic joining of optical components to a bench or package substrate. Thus, the fact that appellants have referred to the claimed subject matter as an unpopulated “optical” bench precursor structure would appear to be of no particular moment, since that designation is more a matter of intended use than an actual structural difference.

In light of the foregoing, the rejection of claim 1 under 35 U.S.C. § 103(a) is sustained. Thus, the decision of the examiner is affirmed.

Appeal No. 2005-2754  
Application No. 10/391,835

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

AFFIRMED

CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
MURRIEL E. CRAWFORD	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

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**Comment [jvn1]:** Type or Paste  
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