

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte BYEONG-DUCK LEE

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Appeal No. 2001-1448  
Application No. 09/121,036

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ON BRIEF

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Before FRANKFORT, STAAB, and MCQUADE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 12 through 28, all of the claims remaining in this application. On page 11 of the examiner's answer (Paper No. 18), it has been indicated that claims 26 through 28 now stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Accordingly, only claims 12 through 25 remain for our consideration on appeal. Claims 1 through 11 have been canceled.

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As noted on page 1 of the specification, appellant's invention relates to a semiconductor chip package having a clip-type lead frame and the method of fabrication thereof. More particularly, the invention before us on appeal is limited to the method of fabricating a chip package. A copy of representative independent claims 12 and 21 can be found in the Appendix to appellant's brief.

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

Kikuchi et al. (Kikuchi)	5,084,694	Jan. 28, 1992
Song	5,554,886	Sep. 10, 1996
Kim et al. (Kim)	5,625,221	Apr. 29, 1997

Claims 12 through 17 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Kikuchi.

Claims 18, 19 and 21 through 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Kikuchi and further in view of Kim.

Rather than reiterate the examiner's specific comments regarding the above-noted rejections and the conflicting

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viewpoints advanced by the examiner and appellant regarding the rejections, we make reference to the final rejection (Paper No. 11, mailed April 11, 2000) and the examiner's answer (Paper No. 18, mailed January 2, 2001) for the reasoning in support of the rejections, and to appellant's brief (Paper No. 17, filed October 11, 2000) and reply brief (Paper No. 19, filed March 2, 2001) for the arguments thereagainst.

#### OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determination that the examiner's above-noted rejections will not be sustained. Our reasons follow.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness (see In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); In re Oetiker, 977 F.2d 1443, 1446,

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24 USPQ2d 1443, 1445 (Fed. Cir. 1992)), which is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art (see In re Bell, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993)). The conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Looking at the examiner's rejection of claims 12 through 17 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Kikuchi, we observe that the only difference identified by the examiner between the subject matter of appellant's independent claim 12 and the chip package seen in Song is that the outer lead portions of Song's chip package (e.g., Fig. 5) are not "in contact with" the side and bottom surface portions of the package body as required in claim 12 on appeal. To account for this difference the examiner turns to Kikuchi, urging that this reference discloses (in Fig. 3) leads

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coming in contact with the package body. From such teachings, the examiner concludes that it would have been obvious to one of ordinary skill in the art "to manufacture a surface mount with leads that extend, cove [sic, cover] and come into contact with the package body to form a unified connection around the assembly" (final rejection, pages 2-3).

Like appellant, and for the reasons set forth on pages 5-11 of the brief and in the reply brief, we find that it is only through the use of impermissible hindsight that the examiner could conclude that it would have been obvious to one of ordinary skill in the art at the time of appellant's invention to combine the teachings of Song and Kikuchi in the manner proposed. While the examiner has set forth the correct test on page 7 of the answer for determining whether a reference is analogous prior art, the examiner has not applied that test to Kikuchi, but instead has again merely indicated what purported teachings of that reference the examiner is relying upon. As appellant has noted, the detection element disclosed in Kikuchi for measuring physical properties (e.g., flow amount or flow rate) of fluids (col. 1, lines 7-11) is not a chip package like that addressed by appellant and does not appear to be reasonably pertinent to the

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particular problem in the manufacture of chip packages addressed by appellant (specification, pages 2-3).

However, even if one were to consider the collective teachings of Song and Kikuchi, we agree with appellant's assessment on pages 6-9 of the brief and in the reply brief that a person of ordinary skill in the art would have found no reason, suggestion or incentive for attempting to combine those references so as to arrive at appellant's claimed subject matter. Simply stated, one of ordinary skill in the art would have found no reason to attempt to modify the bendable lead frame used in the semiconductor chip package of Song (Figs. 3A-10) in light of the flow detection element of Kikuchi and its continuous layer of electrically conductive thick film (3) connecting the cylindrical resistor (2) therein with the lead wires (5).

In that regard, we note, as our court of review indicated in In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992), that it is impermissible to use the claimed invention as an instruction manual or "template" in attempting to piece together isolated disclosures and teachings of the prior art so that the claimed invention is rendered obvious. Moreover, and

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more to the point in the present appeal, we observe that the mere fact that some prior art reference may be modified in the manner suggested by the examiner does not make such a modification obvious unless the prior art suggested the desirability of the modification. See In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir 1984). Here, the prior art relied upon by the examiner contains no such suggestion.

Since we have determined that the teachings and suggestions found in Song and Kikuchi would not have made the subject matter as a whole of independent claim 12 on appeal obvious to one of ordinary skill in the art at the time of appellant's invention, we must refuse to sustain the examiner's rejection of that claim under 35 U.S.C. § 103(a). It follows that the examiner's rejection of dependent claims 13 through 17 and 20 based on Song and Kikuchi will likewise not be sustained.

With respect to the examiner's rejection of claims 18, 19 and 21 through 25 under 35 U.S.C. § 103(a) as being unpatentable over Song in view of Kikuchi and further in view of Kim, we agree with appellant's assessment set forth on pages 11-16 of the brief. More particularly, even though we would agree with the

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examiner that Song discloses outer portions of the leads therein which "cover" top, side and bottom surface portions of the chip package, as broadly set forth in claim 21 on appeal, we find nothing in the teachings of the applied references which is suggestive of the step of "attaching a chip having a plurality of bond pads to a first surface of the heat sink," as required in appellant's claims 18 and 21, nor any rationale on the examiner's part as to why this particular step would otherwise have been obvious. Appellant made this specific argument in the paragraph bridging pages 13 and 14 of the brief, and the examiner has utterly failed to provide any response thereto.

While we would agree with the examiner that it would have been obvious to one of ordinary skill in the art based on the teachings of Kim to provide the chip package of Song with a heat sink mounted on the central portion of the package body (40) therein, as generally seen in Figure 12 of Kim (heat sink 121), we share appellant's view that the applied references do not disclose, teach or suggest the step of "attaching a chip . . . to a first surface of the heat sink," as required in appellant's claims 18 and 21 on appeal.

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Accordingly, we will not sustain the examiner's rejection of these claims under 35 U.S.C. § 103(a) as being unpatentable over Song, Kikuchi and Kim. It follows that the examiner's rejection of dependent claims 19 and 22 through 25 based on Song, Kikuchi and Kim will likewise not be sustained.

In light of the foregoing, we have concluded that neither of the examiner's rejections of the claims before us on appeal under 35 U.S.C. § 103(a) is sustainable. The decision of the examiner is, accordingly, reversed.

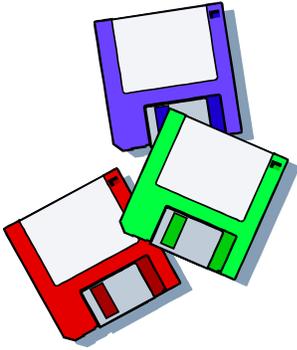
REVERSED

CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
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	)	
	)	
JOHN P. MCQUADE	)	
Administrative Patent Judge	)	

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DECISION: REVERSED

Prepared: June 5, 2003

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