

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 54

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte AKIRA MASE

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Appeal No. 1997-3120  
Application No. 08/219,853

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HEARD: May 15, 2001

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

DECISION ON APPEAL

This is a decision on an appeal which involves claims 34, 36-43, 45-48 and 56-65.

The subject matter on appeal relates to a method for mounting a semiconductor chip on a substrate and to a method of producing electrode patterns. This appealed subject matter

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is adequately illustrated by independent claims 34<sup>1</sup> and 64  
which read as follows:

34. A method for mounting a semiconductor chip on a substrate comprising the steps of:

forming a conductive pattern on one side of a substrate having an insulated surface;

forming a conductive projection at a predetermined position on said conductive pattern;

mounting said semiconductor chip on said substrate utilizing a UV curable adhesive having conductive particles within the adhesive such that when said substrate and projection are adhered to the semiconductor chip, a conductive pad of said chip is electrically connected to said projection by said particles within said adhesive; and

curing said organic adhesive by irradiating said adhesive with UV light from another side of said substrate.

64. A method of producing electrode patterns comprising the steps of:

forming a paste pattern of a resin paste loaded with conductive metal particles;

baking said paste pattern; and

pressing the baked pattern to produce an even top surface.

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<sup>1</sup> We note that the term "organic" in the penultimate line of claim 34 lacks antecedent basis. The consequent informality should be corrected upon return of the application to the jurisdiction of the examiner by deleting the term "organic" from claim 34.

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The references relied upon by the examiner as evidence of obviousness are:

DesMarais, Jr. (DesMarais)	4,327,124	Apr. 27, 1982
Cassat	4,756,756	Jul. 12, 1988

All of the appealed claims are rejected under the first paragraph of 35 U.S.C. § 112 as being based upon a disclosure which would not enable one having ordinary skill in the art to practice the here claimed invention. In the paragraph bridging pages 5 and 6 of the Answer, the examiner expresses his non-enablement position as follows:

In particular, at page 2, lines 28-29, it is stated that nickel particles having an average diameter of 15 microns are to be used in the process. But at page 3, lines 7-11, describing Fig. 3(A), the specification provides that the distance between "pad 8" and the top of "thick portion 3" is 3 microns, even though the nickel particles, previously described as having an average diameter of 15 microns, are caught therebetween. One of ordinary skill in the art is not taught how to capture the 15 micron average diameter nickel particles between the pad and thick portion spaced by only 3 microns. Undue experimentation would be required.

Additionally, claims 61-65 are rejected under 35 U.S.C. § 103 as being unpatentable over Cassat in view of DesMarais. The examiner concludes that, based on the disclosure of

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DesMarais, "it would have been obvious to one of ordinary skill in the art practicing the process of Cassat that the pressing step would have an effect of producing a laminate with a more even top surface and thus articles of more consistent quality" (Answer, page 4).

OPINION

We will not sustain either of the above-noted rejections.

The § 112, first paragraph, rejection of all the appealed claims is not well founded for the reasons expressed by the appellant in the Reply Brief. Regarding the specific concern expressed by the examiner of disposing 15 micron size particles in the 3 micron size gap shown in Figure 3(A) of the appellant's drawing, we consider the explanation proffered in the Reply Brief to be rational and consistent with the appellant's desire to obtain effective electrical contact. More significantly, the examiner has provided no probative evidence in support of his refusal to believe and accept this explanation. In light of his failure to provide such probative evidence, it is appropriate to regard the examiner as having failed to carry his initial burden of doubting the

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enablement of the appellant's disclosure. In re Marzocchi,  
439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

As for the § 103 rejection, it is the examiner's basic position that the flexible pressure roller referred to in EXAMPLE 5 of Cassat would provide a pressing step to thereby produce an even top surface as required by the here rejected claims. There is simply no basis, however, for assuming that patentee's flexible pressure roller would exert sufficient pressure or pressing force so as to produce the desired result of an even top surface. Certainly, DesMarais provides no such basis contrary to the examiner's apparent belief. For all we know based on this record, the flexible pressure roller of Cassat does not alter in any way the top surface of any pattern contacted thereby. It follows that the § 103 rejection of claims 61-65 also cannot be sustained.

The decision of the examiner is reversed.

REVERSED

EDWARD C. KIMLIN )  
Administrative Patent Judge )  
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BRADLEY R. GARRIS	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
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THOMAS A. WALTZ	)	
Administrative Patent Judge	)	

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