

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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BENEDETTO VIGNA and
ENRICO MARIA ALFONSO RAVANELLI

Appeal No. 2001-0684
Application No. 09/205,668

ON BRIEF

Before BARRETT, DIXON, and BLANKENSHIP, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-13 and 23-27, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

Appellants' invention relates to an integrated electronic device comprising a mechanical stress protection structure. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. An integrated electronic device comprising:
 - a semiconductor material body;
 - an electronic component housed in said semiconductor material body and having a periphery;
 - an electrically insulating region extending on top of said semiconductor material body and including a central portion positioned directly above all of the electronic component;
 - a pad region extending on top of said electrically insulating region;
 - and
 - a protection structure of a material different from and extending into said electrically insulating region, said protection structure contacting and extending downward from portions of the pad region that are not directly above said electronic component, said protection structure including a peripheral portion extending around a predominant part of the central portion of the electrically insulating region.

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

Chittipeddi et al. (Chittipeddi)	5,751,065	May 12, 1998 (Filed Oct. 30, 1995)
Wollesen	5,900,668	May 4, 1999 (Filed Nov. 30, 1995)

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Claims 6 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as the invention. Claims 1-5, 7-10, 12, 13, and 23-27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Wollesen in view of Chittipeddi.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 14, mailed Oct. 24, 2000) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No.13, filed Oct. 4, 2000) and reply brief (Paper No. 15, filed Dec. 28, 2000) for appellants' 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 make the determinations which follow.

35 U.S.C. § 112, SECOND PARAGRAPH

With respect to claim 6, the examiner maintains that it is unclear how claim 1 shows the peripheral region as being connected to the pad and claim 6 states that the peripheral region is floating. Appellants argue that the language of claim 6 is clear in view of the disclosed invention wherein there may be a connection/contact and still be

electrically floating. (See brief at page 4.) We agree with appellants. The examiner argues that the limitation would be to a method of use of the pad in a device and would not carry patentable weight. (See answer at page 5.) While this may be a reasonable interpretation of the claim, it does not make the two claims inconsistent, in our view. Therefore, we will not sustain the rejection of claim 6 under 35 U.S.C. § 112.

With respect to claim 11, the examiner maintains that the third contact is redundant. (See answer at pages 3 and 5.) Appellants argue that nothing in claim 1 requires the limitations as set forth in dependent claim 11. (See brief at page 5.) We agree with appellants. While claim 1 recites “extending into said electrically insulating region,” this would not necessarily require “a third contact portion extending through said insulating region” as recited in claim 11. Therefore, we do not find the limitation redundant as maintained by the examiner, and we will not sustain the rejection under 35 U.S.C. § 112.

35 U.S.C. § 103

With respect to independent claim 1, appellants argue that the combination of Wollesen and Chittipeddi does not teach or suggest the limitation of claim 1 concerning “said protection structure contacting and extending downward from portions of the pad region that are not directly above said electronic component, said protection structure including a peripheral portion extending around a predominant part of the central portion of the electrically insulating region.” (See brief at page 6.) We agree with

appellants. Appellants argue that the plugs of Wollesen are positioned on two sides of an air pocket or dielectric layer, but nothing suggests that the two plugs can or should extend around a predominant part of either. (See brief at page 6.) Appellants further argue that nothing in Wollesen suggests any other structure that extends around a central portion of an insulating region. (See brief at page 6.) Appellants argue that Chittipeddi does not remedy the above deficiency. (See brief at page 6.) We agree with appellants. Appellants argue that the layer 215 as shown in Figure 5 of Chittipeddi does not extend around a predominant part of any insulating layer. (See brief at page 6.) We agree with appellants.

The examiner maintains that Wollesen teaches a protection structure that extends around the right hand region between features 4. (See answer at page 5.) We do not agree with the examiner's characterization of Wollesen. From our review of Wollesen the "plugs" 15 are not shown to be extended, and we have no top view of the device to determine the dimensions thereof. Therefore, it would require us to speculate as to the configuration and extent of the extension of the plugs. Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner and Board may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. **See In re Warner**, 379 F.2d 1011, 1017, 154 USPQ 173, 177

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(CCPA 1967), **cert. denied**, 389 U.S. 1057 (1968). We do not find that Wollesen or Chittipeddi teaches the limitation of extending around a predominant part of the central portion of the electrically insulating region. The examiner admits that Wollesen does not teach a region that extends around a predominant part of any region, but relies upon the teachings of Chittipeddi regarding peripheral element 215 that is substantially annular. (See answer at page 6.) We disagree with the examiner's findings.

Appellants again reiterate in the reply at pages 2-4 that neither Wollesen nor Chittipeddi teaches or suggests the claimed invention having a protection structure with a peripheral portion that extends around a predominant part of a central portion of an insulating region. We agree with appellants that neither Wollesen nor Chittipeddi clearly teaches or suggests this limitation.

The examiner relies upon the teaching of Chittipeddi in Figures 5 and 6. (See answer at page 6.) The examiner maintains that Figure 5 "can clearly be seen as being annular" and in Figure 6 element 311 is "almost completely annular." We disagree with the examiner's findings since element 311 in Figure 6 is merely a conductor connecting the two comb-like portions 309 and 310. Appellants have submitted a definition of annular with the reply which provide the ordinary definition as shaped like a ring. From our review of the teachings of Chittipeddi, we find not an annular or ring-shaped portion in Figure 6 as required by independent claim 23 nor do we find that the stress relief holes in Figure 5 element 307 form a peripheral portion extending around a

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predominant part of the central portion of the electrically insulating region as recited in independent claim 1. Appellants argue that the examiner has not set forth a ***prima facie*** case of obviousness. (See brief at page 7.) We agree with appellants that the examiner has not shown that either Wollesen or Chittopeddi teaches all of the elements as claimed or the combination would have fairly suggested the invention as claimed. Therefore, we cannot sustain the rejection of independent claims 1 and 23 and their respective dependent claims.

CONCLUSION

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To summarize, the decision of the examiner to reject claim 1-13 and 23-27 under
35 U.S.C. § 103 is reversed.

REVERSED

LEE E. BARRETT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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