

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte JEAN-BAPTISTE MARTIN  
and WILLIAM D. WASMER

---

Appeal No. 1999-1626  
Application 08/820,428

---

ON BRIEF

---

Before THOMAS, JERRY SMITH and BLANKENSHIP, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 1, 2 and 5 through 9. The examiner has indicated the allowability of claims 3 and 4.

Claim 1 is reproduced below:

Appeal No. 1999-1626  
Application 08/820,428

1. A surface mount semiconductor diode device having first and second coplanar contacts, the device comprising:

a semiconductor element having a first surface electrically mounted on a surface of a first member formed of conductive material, the first member having an arm which extends in a direction away from the surface of the first member, an end of the arm forming the first contact; and

a cup member formed of conductive material and comprising a wall extending from a bottom portion so as to form an opening surrounded by the wall and having the bottom portion as a base,

wherein the semiconductor element and first member are mounted within the opening such that a second surface of the semiconductor element is electrically coupled to the bottom portion of the cup member and the end of the arm extends above a top surface of the wall,

wherein the cup member further comprises a leg portion integral with and extending from the top surface of the wall such that an end of the leg portion is coplanar with the end of the arm, the end of the leg portion forming the second contact.

The following references are relied on by the examiner:

Mueller	3,209,209	Sep. 28, 1965
Fujisaki et al. (Fujisaki)	4,758,875	July 19, 1988

Claims 1, 2, 5 and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Mueller. Claims 7 through 9 stand rejected under 35 U.S.C. § 103.

As evidence of obviousness, the examiner relies upon Mueller alone as to claim 9, with the addition of Fujisaki as to claims 7 and 8.

Appeal No. 1999-1626  
Application 08/820,428

Rather than repeat the positions of the appellants and the examiner, reference is made to the brief and the answer for the respective details thereof.

### OPINION

We reverse each of the three art rejections of the claims on appeal.

Our consideration of the claimed invention in light of the teachings and showings within Mueller leads us to agree with appellants' positions at pages 5 and 6 of the brief. At the outset, we note that the claimed first and second coplanar contacts of the preamble are described in the body of claim 1 on appeal. The closing language of the second wherein clause at the end of the claim states that "an end of the leg portion is coplanar with the end of the arm." Thus, the coplanar nature of the contacts recited in the preamble is also recited in the body of claim 1 on appeal.

The shank 4 and its head 5 of Figures 1 through 4 of Mueller generally relate in shape to the claimed first conductive member, disclosed as element 54 in Figure 3 of the disclosed invention. As analogized by the examiner, the metallic cap 1 generally conforms in shape to the claimed cup member disclosed in Figure 3 as element 62. Figures 3 and 4 of Mueller show that the shank 4 extends through the printed circuit board 12, itself

Appeal No. 1999-1626  
Application 08/820,428

comprised in these figures of conductive printed circuits 14 with an intermediate insulating layer 13. The disputed teachings at column 3, lines 37 through 43 indicate that alternatively the shank 4 may not necessarily pass completely through the circuit board 12 but only may terminate within it or within the support 13 such as when only one printed circuit element 14 is utilized. In any event, the shank 4 still extends into the printed circuit board 14 in some manner according to the teachings and showings in Mueller.

Our understanding of Mueller is therefore consistent with the arguments presented at pages 5 and 6 of the brief where the appellants argue at the bottom of page 5 "to effect fastening, shank 4 passes partially through support 13. Accordingly, the end of the shank 4 is not coplanar with prongs 10." It is these prongs 10 in Figures 1 and 2 of Mueller which are bent into the notches 11 of the corresponding insulating layer 3. The examiner argues the correspondence of these prongs 10 in a bent position to the claimed end of the leg portion of the cup member such as the cap 1 of Mueller. We thus agree with appellants' arguments at the bottom of page 6 of the brief "that Mueller teaches and discloses a solderless assembly without coplanar contacts, which requires securing the assembly of FIG. 2 with a fastening means (e.g., shank 4) that extends into or completely through the printed circuit panel 12."

Appeal No. 1999-1626  
Application 08/820,428

For his part, the examiner's responsive arguments at pages 5 and 6 of the answer are unpersuasive. They appear to be couched in the context of an obviousness-type analysis within 35 U.S.C. §103 where the basic rejection of independent claim 1 is within the confines of 35 U.S.C. §102. According to the teachings and showings of Mueller, we do not agree with the examiner's view at page 6 of the answer such that according to the modified teachings at column 3, lines 37 through 43 of Mueller, the shank would not be level with the tabs 10 since there appears to always be some measurable length of the shank 4 that extends either only into but not through the printed circuit board 12 or all the way through it in Mueller. To the extent Mueller indicates that the bent prongs 10 in the Figures 3 and 4 showings comprise one of the two claimed contacts along with the remaining contact claimed being the shank 4 itself, they are clearly not coplanar as required in the preamble and at the end of claim 1 on appeal.

Because we do not sustain the rejection of independent claim 1 and its dependent claims 2, 5 and 6 under 35 U.S.C. § 102, we must also reverse the rejections of dependent claims 7 through 9 under 35 U.S.C. § 103. Accordingly, the decision of the examiner rejecting various claims under 35 U.S.C. § 102 and 35 U.S.C. § 103 are all reversed.

REVERSED

Appeal No. 1999-1626  
Application 08/820,428

James D. Thomas  
Administrative Patent Judge

Jerry Smith  
Administrative Patent Judge

Howard B. Blankenship  
Administrative Patent Judge

)  
)  
)  
)  
) BOARD OF PATENT  
) APPEALS AND  
) INTERFERENCES  
)  
)  
)

JDT/cam  
On Semiconductor - Intellectual Property Dept.  
Semiconductor Components Industries, LLC  
5005 E. McDowell Road - M/S A230  
Phoenix, AZ 85008

Appeal No. 1999-1626  
Application 08/820,428