

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FREDERIK W. FREERKS, TETSUYA Y. ISHIKAWA,
TIMOTHY Y. WANG, JEFFREY C. HUDGENS,
MOHSEN SALEK, TIM LEONG,
AL DIFRANCESCO and JAMES R. CIULIK

Appeal No. 2003-0668
Application 09/324,889

ON BRIEF

Before PAK, LIEBERMAN, and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 24 through 46. These are all of the claims pending in the application.

Claims 24 and 31 are representative of the subject matter on appeal and are set forth below:

24. A robot blade, comprising:

a body having a blade surface that is at least partially semi-conductive;

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a plurality of conductive contacts adapted to support a substrate and disposed on the body and at least partially above the blade surface which provide an electrical flow path through the contacts and the blade.

31. A substrate processing system, comprising:
- a) a chamber;
 - b) a robot disposed in the chamber; and
 - c) a robot blade connected to the robot, comprising:
 - iii) a body having a blade surface that is at least partially semi-conductive;
 - iv) a plurality of conductive contacts adapted to support a substrate and disposed on the body and at least partially above the blade surface which provide an electrical flow path through the body and the contacts provide an electrical flow path.

The examiner relies on the following references as evidence of unpatentability:

Wada	5,380,137	Jan. 10, 1995
Kitayama et al. (Kitayama)	5,445,486	Aug. 29, 1995
Ohsawa	5,540,098	Jul. 30, 1996

Claims 24 through 46 stand rejected under 35 U.S.C. § 112, second paragraph (indefiniteness).

Claims 24, 26 through 29, 39, and 41 through 44 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kitayama.

Claims 25, 30, 40 and 45 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kitayama in view of Wada.

Claims 31, 33 through 36, 38, 46 stand rejected under 35

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U.S.C. § 103 as being obvious over Ohsawa in view of Kitayama.

Claims 32 and 37 stand rejected under 35 U.S.C. § 103 as being obvious over Ohsawa in view of Kitayama and further in view of Wada.

OPINION

We have carefully reviewed appellants' brief and reply brief and the examiner's answer. This review has led us to conclude that none of the examiner's rejections are well-founded.

I. The 35 U.S.C. § 112, second paragraph rejection (indefiniteness)

On page 2 of the answer, the examiner asserts that claims 24, 31, and 39 are indefinite because it is not understood what purpose is served by making the blade body and contacts electrically conductive, and because it is not understood what keeps the substrate on the contacts in absence of containment means, and because no motive means for the blade has been set forth to permit the substrate to be acquired and to be released from the contacts. The examiner also asserts that the term "semi-conductive" appears to be a relative and indefinite term. With regard to the word "chamber" found in claims 31 and 46, the examiner asserts that no chamber structure is recited and therefore this renders the claim incomplete.

The examiner bears the initial burden of presenting a prima facie case of unpatentability, whether the rejection is based on prior art or any other ground. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The requirement under 35 U.S.C. § 112, second paragraph, is only that the claims set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). The definiteness of

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the language employed in the claims must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and the application disclosure as it would be interpreted by one of ordinary skill in the art. See In re Angstadt, 537 F.2d 498, 501, 190 USPQ 214, 217 (CCPA 1976). Here, we determine that the examiner has not met this burden for the following reasons.

The examiner has not convincingly explained why the claims do not set out and circumscribe a particular area with a reasonable degree of precision and particularity. At the bottom of page 3 and the top of page 4, of appellants' specification, the specification discloses that materials are selected to provide an electrical flow path through the contacts to discharge any electrical charge which may build up on the substrate during processing. At the top of page 6 of the specification, the specification discloses that the substrate can be supported on as few as three contacts. Appellants' Fig. 7 illustrates how the substrate is supported by the blade and contacts. On page 5 of the specification, the specification discloses that lateral shoulders can be any shape to conform to the shape of the substrate being supported. On page 9 of the specification, the specification discloses that Fig. 15 is a schematic diagram of an exemplary integrated cluster tool 60. A robot can be incorporated into a first transfer chamber of the cluster tool and allows transfer of substrates from one location to another. Finally, with regard to the word "semi-conductive", page 7 of the specification, beginning at line 5, clearly defines this word and provides examples of materials. Hence, the specification clearly describes each aspect of the claims found problematic by the examiner (as mentioned above) such that the claims are definite.

In view of the specification disclosure clarifying the claim language in combination with the lack of explanation by the

examiner, we determine that the examiner's position is baseless. We therefore reverse this rejection.

II. The Art Rejections

On pages 6 through 10 of the brief, appellants set forth their arguments regarding each of the art rejections. Common to each of the arguments for each rejection is that Kitayama does not teach the claimed conductive contacts. Kitayama is used in each of the rejections for this teaching, and hence, we need only focus on the issue of whether the applied prior art teaches the claimed conductive contacts.

As an initial matter, we find that appellants define the word "conductive" in the specification on page 7, beginning at line 9, as meaning "to include conductive bulk material or a semi-conductive or non-conductive material which is rendered conductive by a conductive coating or a conductive electrical path formed therethrough or thereon." On page 7 beginning at line 16, the specification discloses

[m]aterials which can be used to advantage include, for example, conductive materials such as aluminum, titanium, beryllium, stainless steel, and semi-conductive materials such as SiC, titanium-doped alumina, alumina-SiC composites, carbon-doped AlN, SiN, BN, boron, and other wear resistant and/or conductive or semi-conductive materials.

Hence, the term "semi-conductive" is mutually exclusive of the term "conductive".

On pages 2 through 3 of the answer, the examiner asserts that Kitayama's aluminum silicon carbide composite can be formed so as to be electrically conductive because appellants' specification on page 7 discloses that the blade and contacts can

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be formed of an aluminum-silicon carbide composite. The examiner is incorrect in this regard. That is, on page 7 of appellants' specification, as mentioned above, when the contact is made of a semi-conductive material, the semi-conductive material must be rendered conductive by a conductive coating or a conductive electrical path formed therethrough or thereon. Only in this way can the conductive contact be made of a semi-conductive material, that is, the semiconductive material must be made conductive by a conductive coating or a conductive electrical path made thereon. We agree that Kitayama does teach that the blade/contact can be made of a semi-conductive material (silicon carbide or alumina coated with silicon carbide). But this is not a teaching that the semi-conductive material is rendered conductive by a conductive coating or a conductive electrical path formed therethrough or thereon. It is simply a teaching of using a semi-conductive material as the blade/contact. There is no teaching in Kitayama to make the semi-conductive material conductive by a conductive coating or a conductive electrical path formed therethrough or thereon.

Beginning at page 6 of the brief, appellants point out the fact that Kitayama discloses contacts comprising a semi-conductive material or insulated material, but does not teach to make such contacts conductive contacts. We agree.

Because the applied prior art fails to teach "conductive contacts", we reverse each of the rejections. We note that the other applied references do not cure this deficiency of Kitayama.

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III. Conclusion

We reverse the 35 U.S.C. § 112, second paragraph
(indefiniteness) rejection.

We also reverse each of the art rejections.

REVERSED

CHUNG K. PAK)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
PAUL LIEBERMAN)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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