

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANASTACIO C. FUENTES, JR., REYNALDO S. ATIENZA, JR.
and CHESALON M. CLAVIO

Appeal No. 2006-0312
Application No. 10/145,171

ON BRIEF

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

DECISION ON APPEAL

This is an appeal from the final rejection of claims 10-22. Claims 28-34 have been withdrawn from consideration. Claim 10 is illustrative:

10. An apparatus comprising:

a grinder to reduce the thickness of a substrate; and

an air ionizing source to direct ionized air onto the substrate prior to dicing of the substrate and after the thickness of the substrate is reduced by the grinder, the ionized air reducing an accumulation of electrostatic charge on the substrate to reduce substrate warpage.

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In addition to the admitted prior art found in appellants' specification, the examiner relies upon the following references:

Mitsubishi Elec. Corp.	02-111506	Apr. 2, 1990
(Published Japanese Patent Application) (hereinafter referred to as JP '506).		
Hitachi, Ltd.	04-7855	Jan. 13, 1992
(Published Japanese Patent Application) (hereinafter referred to as JP '855).		
Fuji Film Micro Device KK,	06-310480	Nov. 4, 1994
(Published Japanese Patent Application) (hereinafter referred to as JP '480).		
Toshiba Corp.	08-124885	May 17, 1996
(Published Japanese Patent Application) (hereinafter referred to as JP '885).		
Disco Abrasive Sys., Ltd.	10-15790	Jan. 20, 1998
(Published Japanese Patent Application) (hereinafter referred to as JP '790).		

Appellants' claimed invention is directed to an apparatus for reducing the thickness of a substrate, such as a semiconductor wafer, with a grinder. The apparatus comprises an air ionizing source which directs ionized air onto the substrate prior to its dicing and after the thickness of the substrate is reduced by the grinder. The ionized air reduces accumulation of undesirable electrostatic charge on the substrate and reduces its warpage.

Appealed claims 10, 11 and 13 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over JP '790. The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

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(a) claims 10-13, 15, 16 and 18-22 over the admitted prior art in view of JP '790 and either JP '885 or JP '506,

(b) claim 14 over the references cited in (a) above further in view of JP '480, and

(c) claim 17 over the admitted prior art in view of JP '790 and either JP '885 or JP '506, further in view of JP '855.

Appellants have not separately argued any particular claim on appeal. Accordingly, the groups of claims separately rejected by the examiner stand or fall together.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we find ourselves in complete agreement with the examiner's reasoned analysis and application of the prior art, as well as his thorough disposition of the arguments raised by appellants. Accordingly, we will adopt the examiner's reasoning as our own in sustaining the rejections of record, and we add the following for emphasis only.

JP '790 discloses, like appellants, an apparatus that treats semiconductor wafers by grinding a back surface to reduce the thickness and feeding ionized gas into the chamber when grinding takes place. JP '790 effects the ionized environment during grinding to prevent the build-up of particulate material

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on the wafer. As in appellants' apparatus, the ionized air is used in JP '790 to reduce the accumulation of electrostatic charge on the wafer surface.

The principal argument advanced by appellants is that JP '790 does not disclose directing the ionized gas onto the substrate, prior to dicing and after the thickness of the substrate is reduced by grinding which, according to appellants, reduces warpage of the substrate. Appellants emphasize that the ionized air of JP '790 is provided during the grinding process, not afterwards, and the ionized air is not directed to the substrate.

The flaw in appellants' argument, as explained by the examiner, is that the argument is not germane to the subject matter on appeal. While the appealed claims define an apparatus, appellants' argument is directed to a process of operation performed by the apparatus. The examiner has set forth persuasive reasoning that the apparatus of JP '790 is fully capable of directing ionized air onto the substrate after the grinding process and prior to the dicing step. On the other hand, appellants have not presented a convincing line of reasoning which demonstrates that the apparatus of JP '790 is not capable of directing ionized air onto the substrate prior to

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dicing and after grinding. Appellants' mere citation of reference figure 1 fails to persuade us that the reference apparatus is not capable of performing the recited operation.

It is well settled that apparatus claims must distinguish over prior art apparatus by the structure defined by the claims, and not by a process or function performed by the apparatus. A prior art apparatus having the same or obvious structure as a claimed apparatus renders a claimed apparatus unpatentable under either Section 102 or Section 103 as long as it is capable of performing the claimed process or function. In re Yanush, 477 F.2d 958, 959, 177 USPQ 705, 706 (CCPA 1973); Ex Parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987). Appellants' statement that "[t]he fact that a device is capable of doing something is not sufficient to satisfy the prima facie case of anticipation, or obviousness" is not in accord with current patent jurisprudence, (page 2 of reply brief, third paragraph).

As for the claim recitation that the ionized air reduces the substrate warpage, we agree with the examiner that it is reasonable to conclude that the ionized air treatment of JP '790 also necessarily reduces the warpage of the reference substrate. This is so because, as explained by the examiner, appellants'

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specification relates that substrate warpage is reduced as a result of the exposure of the substrate to ionized air.

Appellants have advanced no reason why the ionized air treatment of JP '790 would not result in a reduction in warpage of the substrate.

As a final point, we note that appellants bases no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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CHUNK K. PAK)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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THOMAS A. WALTZ)	
Administrative Patent Judge)	

ECK/hh

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