

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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID R. BEAULIEU

Appeal No. 2001-2505
Application No. 09/072,097

ON BRIEF

Before COHEN, FRANKFORT, and CRAWFORD, Administrative Patent Judges.

CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 3, 7 to 11, 14 to 16 and 22 to 26. Claims 4, 13 and 27 have been cancelled. Claim 28 has been allowed. Claims 5, 6, 12, and 17 to 21 have been objected because they depend on a rejected claim but would be allowable if rewritten in independent form.

The appellant's claimed subject matter is a substrate transport apparatus. An understanding of the claimed subject

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matter can be derived from a reading of claim 1 which appears in the appendix of appellant's brief.

The prior art

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

Hertel et al. (Hertel)	4,836,733	Jun. 6, 1989
Poduje et al. (Poduje)	5,102,280	Apr. 7, 1992
Uehara et al (Uehara)	5,584,647	Dec. 17, 1996
Hofmeister (WO'911)	WO 94/23911	Oct. 27, 1994
(International Application published under the PCT)		

The rejections

Claims 1, 2, 10 and 16 and 23 to 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or in the alternative obvious in view of Uehara.

Claims 3, 7, 11 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Uehara as applied to claims 1 and 2 above and further in view of Poduje.

Claims 7, 8, 15 and 22 stand rejected under 35 U.S.C. § 103 as being unpatentable over Uehara as applied to claim 1 above, and further in view of Hertel.

Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Uehara in view WO 94/23911.

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Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 15) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 12) for the appellant's arguments thereagainst.

Opinion

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

We turn first to the examiner's rejection of claims 1, 2, 10, 16 and 23 to 26 under 35 U.S.C. § 102(b) as anticipated by or in the alternative under 35 U.S.C. § 103 by Uehara.

Appellant's subject matter as depicted in Figures 3 and 4 and recited in claim 1 is a substrate transport apparatus which includes a drive section 36 and a moveable arm assembly 38 connected to the drive section 36. The arm assembly 38 includes two driven arm assemblies 56 and 58. The arm assemblies 56 and 58 have an inner arm 60 and 66 respectively and an outer arm 62 and 68

respectively. The inner arms 60 and 66 each are connected on a common axis 98 with the drive section 36. The outer arms 62 and 68 are rotatably connected to the inner arms 60 and 66 respectively thereby forming a cantilevered arm configuration. Transmission belts 64 and 70 are connected between the outer arms 62 and 68 and a pulley 48 on the drive section 36. This pulley 48 is fixedly stationarily connected to the housing of the drive section 36. The position of the inner arms 60 and 66 is controlled by the drive section 36. The position of the outer arms is controlled by the transmission belts 64 and 70.

Uehara discloses and depicts in Figures 2 and 5 to 7, an object handling device which includes a drive section and a moveable arm assembly which includes two driven arm assemblies 1 and 2 (col. 2, lines 31 to 32). The arm assemblies have inner arms 30 and 50 respectively and outer arms 37 and 57 respectively (Figure 2). The inner arm assemblies are connected on a common axis of rotation with the drive section. The outer arms 37 and 57 are rotatably connected to the inner arms 30 and 50 respectively thereby forming a general cantilevered arm configuration. Transmission belts 34, 54 are connected between the outer arms 37 and 57 and pulleys 26 and 27 respectively (col.3, lines 18 to 65). The pulleys 26, 27 are connected to the third drive section 7, 23

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(col. 3, lines 6 to 9). Drive section 7 is actuated by motor 10 to rotate the arm assemblies angularly (col. 4, lines 28 to 30).

The examiner concludes:

Note pulley 23 in Uehara is fixedly stationarily connected with housing 7 and when motor 10 of Uehara is not being actuated Uehara's device meets the instant claims. Moreover it would have been obvious to delete motor 10 and its associated drive structure if desiring not to rotate the device. In summary the instant claims are in essence drawn to a subcombination of Uehara.
[answer at pages 2 to 3]

Appellants argue that Uehara does not disclose a pulley fixedly connected to the housing of the drive section such that the pulley is rotationally stationary. We agree.

The case 23 carrying pulleys 26, 27 is not fixedly stationary connected to the housing of the drive section so that the pulley is rotationally stationary as is recited in claim 1. While it is true that the case 23 carrying pulleys 26, 27 will be stationary if the motor 10 is not actuated, that does not make the case carrying pulleys 26, 22 a rotationally stationary pulley. Rather, the case carrying pulleys 26, 22 is a rotatable pulley that can be rendered stationary if one desires to do so. In addition, in our view the housing or shaft 7 is not a rotationally stationary housing because shaft 7 is clearly disclosed as a rotatable shaft (See col. 2, lines 64 to 65).

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In view of the foregoing, we will not sustain the examiner's rejection of claim 1, or claim 2 dependent thereon.

In regard to claim 10, we note that claim 10 also recites a rotationally stationary housing and a pulley connected to the housing such that the pulley is rotationally stationary. Therefore, we will not sustain this rejection as it is directed to claim 10.

Claim 16 also recites a rotationally stationary housing and a pulley connected to the housing to form a rotationally stationary pulley. Therefore, we will not sustain this rejection as it is directed to claim 16 .

Claim 23 recites a permanently rotationally stationary pulley. As such, we will not sustain this rejection as it is directed to claim 23 and claims 24 to 26 dependent thereon.

We turn next to the examiner's rejection of claims 3, 7, 11 and 14 under 35 U.S.C. § 103 as being unpatentable over Uehara in view of Poduje. Claims 3 and 7 are dependent on claim 1 and claims 11 and 14 are dependent on claim 10. The examiner relies on Poduje for teaching mounting the device in Uehara on a means for vertically moving the wafer. However, we have examined Uehara and have determined that Uehara fails to disclose a rotationally stationary pulley connected to a stationary housing. Further, we

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find no suggestion in Uehara to modify the housing 7 and the case 23 carrying pulleys 26, 22 so as to be stationary. Quite to the contrary, Uehara discloses that it is important that the housing or drive shaft 7 be rotatable so as to transfer objects such as semiconductor wafers (see col. 4, lines 28 to 35). We have also reviewed the disclosure of Poduje and find that Poduje does not cure the deficiencies noted above for Uehara.

In view of the forgoing, we will not sustain the rejection of claims 3, 7, 11 and 14 under 35 U.S.C. § 103 as being unpatentable over Uehara in view of Poduje.

We turn next to the examiner's rejection of claims 7, 8, 15 and 22 under 35 U.S.C. § 103 as being unpatentable over Uehara in view of Hertel. Claim 8 is dependent on claim 1, claim 15 is dependent on claim 10, and claim 22 is dependent on claim 16. The examiner relies on Hertel for disclosing mounting an arm on a cart to move an arm between adjacent work stations. However, we have reviewed the disclosure of Hertel and have determined that Hertel does not cure the deficiencies noted above for Uehara. Therefore, we will not sustain this rejection.

We turn lastly to the examiner's rejection of claim 9 under 35 U.S.C. § 103 as being unpatentable over Uehara and Hertel and further in view of WO 94-23911. Claim 9 is dependent on claim 1.

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The examiner relies on WO 94-23911 for teaching stacked drive sections. We have reviewed the disclosure of WO 94-23911 and have determined that it does not cure the deficiencies noted above for Uehara. Therefore, we will not sustain this rejection.

The decision of the examiner is reversed.

REVERSED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
MURRIEL E. CRAWFORD)	
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