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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/025,752	02/05/2008	Lutz Rebstock	1229-015347-US(PAR)	1850

106446 7590 11/23/2016
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ART UNIT	PAPER NUMBER
3652	

MAIL DATE	DELIVERY MODE
11/23/2016	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LUTZ REBSTOCK

Appeal 2014-009993
Application 12/025,752
Technology Center 3600

Before JILL D. HILL, LISA M. GUIJT, and ERIC C. JESCHKE, *Administrative Patent Judges*.

HILL, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Lutz Rebstock ("Appellant") appeals under 35 U.S.C. § 134(a) from the rejections of claims 1–13, 15–18, and 21–23.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] Claims 14, 19, and 20 are cancelled. *See* Br. 17, 18, Claims App.

CLAIMED SUBJECT MATTER

Claims 1, 8, and 10 are independent. Independent claim 1, reproduced below, illustrates the claimed subject matter, with the key disputed limitation italicized.

> 1. A buffer assembly interfacing a substrate equipment, the buffer assembly comprising:
>
> a transport buffer, the transport buffer comprising:
>
> one or more buffer stations for storing one or more substrate containers containing substrates; and
>
> a buffer loading station adapted for holding a substrate container;
>
> a buffer transfer mechanism to transfer a substrate container between the buffer loading station and the buffer stations; and
>
> an interface mechanism adapted for transferring a substrate container between the transport buffer and an equipment loading station of the substrate equipment,
>
> wherein the equipment loading station is configured to accept a substrate container transferring from the interface mechanism,
>
> *wherein the equipment loading station is further configured to directly accept a substrate container loaded manually by an operator without an intermediate transfer of the substrate container for transferring substrates or substrate container to the substrate equipment*.

REJECTIONS

I. Claims 1–7, 10–13, 15–18, and 21–23 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

II. Claims 1–7, 10–13, 15–18, and 21–23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

III. Claims 1–13, 15–17, and 21–23 stand rejected under 35 U.S.C. § 103(a) as obvious over Larson (US 2003/0091410 A1; pub. May 15, 2003).

IV. Claim 18 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Larson and Schmutz (US 7,134,825 B1; iss. Nov. 14, 2006).

ANALYSIS

Rejection I – Written Description

The Examiner finds that the recitation of "without an intermediate transfer of the substrate container" in claims 1, 10, and 23 is not sufficiently described in the original disclosure because a negative limitation must have a basis in the original disclosure, apart from the mere absence of a positive recitation. Final Act. 3.

Appellant argues that "without an intermediate transfer" has support in Figures 10 and 12 and paragraphs 68, 74, and 75 of the Specification. Br. 6–7. Appellant has the better argument. The Federal Circuit has explained that "[n]egative claim limitations are adequately supported when the specification describes a reason to exclude the relevant limitation," and the reason to exclude may be provided by properly describing alternative features of the patented invention. *Inphi Corp. v. Netlist, Inc.*, 805 F.3d 1350, 1356 (Fed. Cir. 2015) (citing *In re Johnson*, 558 F.2d 1008, 1019 (CCPA 1977)). Here, the Specification describes an embodiment of the invention in which "an operator can load a container to the MLP" and the MLP "can interface with the stocker loading station 103, preferably through a mechanism 206." Spec. 13. The Specification also describes alternative

embodiments in which "the stocker loading station 55 can receive the container from the OHT station 59, from an MLP station, or from the operator." *Id.* at 17. Given that the Specification properly describes alternative features for the stocker loading station in which it receives containers loaded manually by the operator or through an intermediate transfer, e.g., the MLP, the Specification provides an embodiment in which an intermediate transfer is excluded. Thus, the negative limitation in the claims is adequately supported.

In view of the foregoing, we do not sustain the rejection of claims 1, 10, and 23 under 35 U.S.C. § 112, first paragraph. Claims 2–7, 11–13, 15–18, 21, and 22 depend from either claim 1 or 10, and we therefore do not sustain the rejection thereof.

Rejection II – Indefiniteness

The Examiner finds that the limitations of claims 1, 10,[2] and 23 that include "without intermediate transfer of the substrate container" render the claims indefinite because "[i]t is not clear what–if any–additional structure is required to make the equipment loading station configured in this way." Final Act. 3–4.

Appellant argues that "the limitation 'without an immediate transfer of the substrate container' provides a clear meaning that an operator can

[2] In the body of the rejection, the Examiner states that claim 8 recites "the stocker loading station is configured to directly accept a substrate container loaded manually by an operator without an intermediate transfer of the substrate container." Final Act. 4. However, this limitation is recited in claim 10 (Br. 17, Claims App.), which is also identified in the statement of the rejection, while claim 8 is not (Final Act. 3). Accordingly, the body of the rejection includes a typographical error and should refer to claim 10.

directly load and unload a container from the equipment loading station, without the use of an intermediate station." Br. 8–9. We agree. Furthermore, as discussed *supra*, the Specification describes embodiments in which (1) an operator may directly load a container into the loading station, or (2) the operator may load the container at another station, e.g., an MLP or an OHT, which acts as an intermediate transfer device between the operator and the loading station. *See* Spec. 13, 17. One skilled in the art would understand from Appellant's disclosure that the loading station being configured to "accept a substrate container loaded manually by an operator without an intermediate transfer of the substrate container" requires the loading station to be configured to directly receive substrate containers from an operator, i.e., without the use of an additional transfer device such as an MLP or an OHT.

For this reason, we do not sustain the rejection of claims 1, 10, and 23 under 35 U.S.C. § 112, second paragraph. Claims 2–7, 11–13, 15–18, 21, and 22 depend from either claim 1 or 10, and we therefore do not sustain the rejection thereof.

Rejection III – Prior Art

Independent claims 1 and 10 recite, *inter alia*, a buffer assembly "wherein the equipment loading station is further configured to directly accept a substrate container loaded manually by an operator without an intermediate transfer of the substrate container." Br. 15, 17, Claims App. Independent claim 8 recites a buffer assembly "wherein the equipment loading station is further configured to directly accept a substrate container loaded manually by an operator," without the negative limitation of claims 1 and 10. *Id.* at 16.

The Examiner finds that, *inter alia*, "Larson's equipment loading station . . . is configured to directly accept a substrate container loaded manually by an operator without an intermediate transfer of the substrate container (for example, via portal 42)." Final Act. 5. Appellant disagrees, arguing that an operator cannot directly access Larson's loading station 54, and therefore Larson's equipment loading station is not configured to directly accept a container loaded manually by an operator. Br. 12. Appellant explains that only Larson's shelf 36 is directly accessible to a human operator, and only a robot (which performs an intermediate transfer) can access the loading station 54. *Id.*

The Examiner responds that Larson's loading station is capable of directly receiving containers loaded manually by an operator because "Larson's shelf 54 has a flat upper surface which is slightly larger than a footprint of a container." Ans. 4. The Examiner also responds that Larson discloses the loading station receiving containers "placed there by the operator of robot 62." *Id.*

Appellant has the better argument. Larson discloses a housing 32 covering almost the entirety of the process tool 10, the process tool 10 being provided with "one or more interfaces through which batches of processable microelectronic substrates . . . may be transported into and taken from tool 10." Larson ¶ 26, Fig. 1. A substrate container 40 is placed on an operator-accessible shelf 36 by an operator, and then conveyed via robot 62 (i.e., an interface) to another shelf 56 from with it can operatively engage the tool 10. *Id.* ¶¶ 27–36. The Examiner has not explained how an operator could access shelf 56 through Larson's housing 32, which covers the process tool 10. Larson is silent regarding any manual access to the loading station shelf 56.

Further, even if we agreed that transfer via a robot could be considered manual loading, we fail to see any disclosure in Larson that an operator controls the robot. Accordingly, the Examiner's finding that Larson's equipment loading station is configured to directly accept a substrate container loaded manually by an operator is not supported by a preponderance of the evidence.

For these reasons, we do not sustain the rejection of independent claims 1, 8, and 10 under 35 U.S.C. § 103(a) as unpatentable over Larson. Claims 2–13, 15–17, and 21–23 depend from one of independent claims 1, 8, and 10, and we therefore do not sustain the rejection thereof.

Rejection IV – Prior Art

Rejection IV additionally pertains to claim 18, which depends from independent claim 10. The Examiner does not rely on Schmutz in any manner that would cure the deficiencies of Larson, and we therefore do not sustain Rejection IV for the reasons set forth above regarding Rejection III.

DECISION

We REVERSE the Examiner's rejection of claims 1–7, 10–13, 15–18, and 21–23 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

We REVERSE the Examiner's rejection of claims 1–7, 10–13, 15–18, and 21–23 under 35 U.S.C. § 112, second paragraph, as indefinite.

We REVERSE the Examiner's rejection of claims 1–13, 15–17, and 21–23 under 35 U.S.C. § 103(a) as unpatentable over Larson.

We REVERSE the Examiner's rejection of claim 18 under 35 U.S.C. § 103(a) as unpatentable over Larson and Schmutz.

REVERSED