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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ENVER DES and MORITZ JOHANNES JOB

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Appeal 2019-004151  
Application 15/115,694  
Technology Center 3700

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Before JENNIFER D. BAHR, STEFAN STAICOVICI, and  
RICHARD H. MARSCHALL, *Administrative Patent Judges*.

STAICOVICI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's decision in the Final Office Action (dated July 30, 2018, hereinafter "Final Act.") rejecting claims 11–19, 21, and 22.<sup>2</sup> We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

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<sup>1</sup> We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Pierburg Pump Technology GmbH is identified as the real party in interest in Appellant's Appeal Brief (filed Dec. 17, 2018, hereinafter "Appeal Br."). Appeal Br. 2.

<sup>2</sup> Claims 1–10 and 20 are canceled. *See* Appellant's Supplemental Appeal Brief 5, 6 (filed Jan. 18, 2019, hereinafter "Suppl. Appeal Br.>").

## SUMMARY OF DECISION

We AFFIRM.

### INVENTION

Appellant's invention is directed to a motor vehicle vacuum pump.

Spec. para. 2.<sup>3</sup>

Claim 11, the sole independent claim, is representative of the claimed invention and reads as follows:

11. A motor vehicle vacuum pump comprising:
  - a pumping chamber which is configured to provide a compressed gas;
  - an outlet chamber into which the compressed gas exits from the pumping chamber;
  - a separation wall comprising a valve opening and a valve seat arranged on an outlet side of the separation wall around the valve opening, the valve seat comprising a shape which is raised, the separation wall being configured to separate the pumping chamber from the outlet chamber;
  - an outlet valve formed as a non-return valve in the separation wall, the outlet valve being formed by the valve opening in the separation wall and comprising a valve body which comprises a closing body, the outlet valve being configured to have the compressed gas exit from the pumping chamber into the outlet chamber therethrough,
    - wherein,
      - a corresponding part of the closing body is supported on the valve seat when the closing body is in a closed position,
      - at least one of the valve seat and the corresponding part of the closing body comprises microgrooves oriented in a lateral direction,
      - the microgrooves comprise a first longitudinal end and a second longitudinal end, and

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<sup>3</sup> References to the Specification are to the Substitute Specification filed on Aug. 1, 2016.

when the closing body is in a fully closed position so that the closing body fully rests on the valve seat, the first longitudinal end of the microgrooves is open to the valve opening and the second longitudinal end of the microgrooves is open to the outlet chamber.

## REJECTIONS

- I. The Examiner rejects claim 19 under 35 U.S.C. § 112(d) as being of improper dependent form for failing to further limit the subject matter of the claim upon which it depends.
- II. The Examiner rejects claims 11, 14–19, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Friesen,<sup>4</sup> Cho,<sup>5</sup> and Tanihara.<sup>6</sup>
- III. The Examiner rejects claims 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Friesen, Cho, Tanihara, and Ota.<sup>7</sup>

## ANALYSIS

### *Rejection I*

The Examiner finds that claim 19, which depends from independent claim 11, merely restates the limitation of claim 11 that “the first longitudinal end of the microgrooves is open to the valve opening and the

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<sup>4</sup> Friesen et al., EP 1 953 389 A2, published Aug. 6, 2008. All references to the text of Friesen refer to the English language translation contained in the image file wrapper of this application.

<sup>5</sup> Cho, US 5,934,305, issued Aug. 10, 1999.

<sup>6</sup> Tanihara et al., US 2010/0155382 A1, published June 24, 2010.

<sup>7</sup> Ota et al., US 2012/0301341 A1, published Nov. 29, 2012.

second longitudinal end of the microgrooves is open to the outlet chamber.”  
*See* Final Act. 3; *see also* Suppl. Appeal Br. 5–6.

In response, Appellant filed an After-Final Amendment on September 27, 2018 cancelling claim 19. *See* Appeal Br. 6. However, because in the Advisory Action, dated Oct. 15, 2018, the Examiner did not indicate whether Appellant’s After-Final Amendment will be entered for the purpose of appeal, Appellant argued in the Appeal Brief that the rejection of claim 19 under 35 U.S.C. § 112(d) is moot and in the Claims Appendix indicated the status of claim 19 as “Canceled.” *See* Appeal Br. 6–7, 18 (Claims App.).

The Examiner responded with a Notification of Non-Compliant Appeal Brief, dated Dec. 31, 2018 (hereinafter “Office Communication”), stating that “[t]he Claims Appendix [in the Appeal Brief] is non-compliant . . . specifically relating to claim 19” because “[the] Examiner denied the entry of the [c]laims filed [in the After-Final Amendment on] 09/27/2018.” Office Communication 2. Accordingly, Appellant subsequently filed a Supplemental Appeal Brief indicating the status of claim 19 as “Previously Presented.” *See* Suppl. Appeal Br. 6.

Finally, in the Answer, the Examiner restated the rejection of claim 19 under 35 U.S.C. § 112(d). Ans. 3–4.<sup>8</sup> Appellant responded that “[n]o additional arguments are being submitted with respect to the rejection of claim 19 under 35 U.S.C. § 112(d).” Reply Br. 3.<sup>9</sup>

In conclusion, for the foregoing reasons, we understand that claim 19 has not been canceled, and, thus, is part of the instant appeal. Therefore, as Appellant has not set forth any persuasive substantive arguments, we

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<sup>8</sup> Examiner’s Answer, dated Mar. 8, 2019.

<sup>9</sup> Appellant’s Reply Brief, filed May 6, 2019.

summarily sustain the rejection of claim 19 under 35 U.S.C. § 112(d) as being of improper dependent form.

### *Rejection II*

Appellant has not presented arguments for the patentability of claims 14–19, 21, and 22 apart from claim 11. *See* Appeal Br. 7–14. Therefore, in accordance with 37 C.F.R. § 41.37(c)(1)(iv), we select claim 11 as the representative claim to decide the appeal of the rejection of these claims, with claims 14–19, 21, and 22 standing or falling with claim 11.

The Examiner finds that Friesen discloses a motor vehicle pump including, *inter alia*, a pumping chamber 2, an outlet chamber, a separation wall 6 having a valve opening 3 and a valve seat around valve opening 3, and an outlet valve 9 having a valve closing body 12 for covering valve opening 3. Final Act. 4 (citing Friesen, para. 22, Fig. 1). However, the Examiner finds that Friesen does not disclose a “raised” valve seat and laterally oriented “microgrooves,” as called for by claim 11. *Id.* at 5.

Nonetheless, the Examiner finds that Cho discloses a valve seat having a raised shape 124, 123b and Tanihara discloses a valve seat 51 having a plurality of microgrooves 66 oriented in a lateral direction. *Id.* (citing Cho, col. 5, ll. 3–11, Figs. 4, 7; Tanihara, Fig. 11). The Examiner determines that it would have been obvious for a person of ordinary skill in the art to modify Friesen’s valve seat to be raised, as taught by Cho, and to include laterally oriented microgrooves, as taught by Tanihara. *Id.* at 5–6. According to the Examiner, a skilled artisan would make such modifications to provide for “a more efficient valve mechanism” (as per Cho) and “to

‘[assure] a specific pulsation-reducing effect’” (as per Tanihara). *Id.* (citing Cho, col. 5, ll. 5–9; Tanihara, Abstract).

Appellant argues that

[N]one of Friesen, Cho and Tanihara teach or suggest at least the feature of “when the closing body is in a fully closed position so that the closing body fully rests on the valve seat, the first longitudinal end of the microgrooves is open to the valve opening and the second longitudinal end of the microgrooves is open to the outlet chamber” as is required by independent claim 11 of the present invention.

Appeal Br. 9. In particular, Appellant contends that “nowhere does Tanihara teach or suggest that the second longitudinal end of the microgrooves . . . are also open to the outlet chamber.” *Id.* According to Appellant, “the second longitudinal end (i.e., the radially outside edge) of the microgrooves [66] . . . are always adjoined by what appears to be a part of valve plate 2.” *Id.* In an annotated Figure 11(b) of Tanihara, Appellant notes an “Undefined area” (*see id.* at 10), and asserts that if a “groove” were present in the “Undefined area,” such that the second longitudinal end of microgrooves 66 would be open to the outlet chamber, then other views in Tanihara would “show a second ring around suction port 24.” *Id.* at 11. However, according to Appellant, none of Tanihara’s Figures 3(b), 4, 5, 6(a), 9(a), 10(a), and 11(a) “show that any part of valve plate 2 has been removed radially outwards of seat surface 51.” *Id.* at 11–12. Thus, Appellant contends “that the sectional view along D-D [of Figure 11(b)] . . . shows that the second longitudinal end of the microgrooves (i.e., recesses 66) are not open to the [<sup>6</sup>]outlet chamber’ as is required by independent claim 11 of the present invention.” *Id.* at 11.

The Examiner responds that Tanihara’s Figure 11(b) illustrates “an annular groove is required around the valve seat [51] to provide an inlet or

outlet for the fluid used to prevent the valve from elastically bending.” Adv. Act. 2. According to the Examiner, “[t]he top lines . . . represent the outer circumferential edge of the annular groove, on the far side of the valve.” *Id.* The Examiner also takes the position that “the intent of the groove[] is to allow any pressure build-up within the port to be released through the recesses (66), preventing the valve from elastically bending.” *Id.*

Appellant’s arguments are not persuasive because they are not commensurate with the Examiner’s rejection. We appreciate the Examiner’s position that the “Undefined area” in Tanihara’s Figure 11(b) is consistent with an annular (circumferential) groove, which “provide[s] a circular wall encircling the valve seat 51/66.” Ans. 8. At the same time we appreciate Appellant’s position that if the “Undefined area” constitutes an annular groove, as the Examiner finds, Figure 11(a) of Tanihara would include a ring around suction port 24 (valve opening) illustrating the outer edge of the groove. Appeal Br. 11.

However, whether the “Undefined area” of Tanihara constitutes an annular (circumferential) groove is not relevant to the Examiner’s rejection because the Examiner does not rely on Tanihara to disclose that “the second longitudinal end of the microgrooves is open to the outlet chamber,” as recited by claim 11. Rather, the Examiner relies on the combined teachings of Friesen, Cho, and Tanihara to disclose this limitation. In particular, we agree with the Examiner that upon modifying Friesen’s valve seat, as modified by Cho, to include Tanihara’s microgrooves, “the microgrooves extend from the valve opening to the outer edge of the valve seat.” Final Act. 6. Stated differently, the Examiner is correct that upon further modifying the valve seat of Friesen, as modified with Tanihara’s

microgrooves, to raise the valve seat, as taught by Cho, “provides openings on either end of the microgrooves, even when the closing body is in its fully closed position.” *Id.* In other words, Cho’s teaching of raising a valve seat, when applied to the valve seat of Friesen, as modified with Tanihara’s microgrooves, results in microgrooves that have a first longitudinal end open to the valve opening and a second longitudinal end open to the outlet chamber even when the closing body 12 is in a fully closed position. Appellant has not persuasively shown error in the Examiner’s findings and reasoning to combine the teachings of Friesen, Cho and Tanihara.

We are also not persuaded by Appellant’s argument that Tanihara fails to disclose a drainage function (*see* Appeal Br. 12–13) because limitations not appearing in the claims cannot be relied upon for patentability. *In re Self*, 671 F.2d 1344, 1348 (CCPA 1982). “Where the function is not recited in the claim itself by the patentee, we do not import such a limitation.” *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001).

Lastly, Appellant argues that combining Cho with Tanihara would raise Tanihara’s “‘valve seat’, i.e., that area of the valve plate 2 on which the closing body (i.e., suction valve 30) rests, including the area surrounding seat surface 51.” Appeal Br. 13. Thus, according to Appellant, the combination of Cho with Tanihara “would . . . also result in the second longitudinal end of the microgrooves (i.e., the recesses 66 of Tanihara) failing to be open to the outlet chamber as is required by independent claim 11.” *Id.*

We are not persuaded because once more Appellant’s arguments do not reflect the Examiner’s rejection, which in light of Cho, raises the valve seat of Friesen, as modified with Tanihara’s microgrooves. In other words,

the Examiner's rejection does not raise the valve seat of Tanihara, according to Cho, but rather raises the valve seat of Friesen, as modified with Tanihara's microgrooves.

In conclusion, for the foregoing reasons, we sustain the rejection under 35 U.S.C. § 103(a) of claim 11 as unpatentable over Friesen, Cho, and Tanihara. Claims 14–19, 21, and 22 fall with claim 11.

*Rejection III*

Appellant relies on the arguments discussed above. *See* Appeal Br. 15. Therefore, for the reasons discussed *supra*, we also sustain the rejection under 35 U.S.C. § 103(a) of claims 12 and 13 as unpatentable over Friesen, Cho, Tanihara, and Ota.

CONCLUSION

<b>Claim(s) Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
19	112(d)	Improper dependent format	19	
11, 14–19, 21, 22	103(a)	Friesen, Cho, Tanihara	11, 14–19, 21, 22	
12, 13	103(a)	Friesen, Cho, Tanihara, Ota	12, 13	
<b>Overall Outcome</b>			11–19, 21, 22	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED