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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES D. KUTELLA

Appeal 2019-005334
Application 15/158,244
Technology Center 3700

Before MICHAEL C. ASTORINO, ANNETTE R. REIMERS, and
PHILIP J. HOFFMANN, *Administrative Patent Judges*.

ASTORINO, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), the Appellant¹ appeals from the Examiner’s decision to reject claims 1, 2, 5, 7–13, 15–17, and 20–22.² We have jurisdiction under 35 U.S.C. § 6(b). The Appellant’s arguments were heard in an oral hearing held on August 10, 2020.

We AFFIRM IN PART.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as the inventor, James D. Kutella. Appeal Br. 2.

² “An appeal, when taken, is presumed to be taken from the rejection of all claims under rejection unless cancelled by an amendment filed by the applicant and entered by the Office.” 37 C.F.R. § 41.31(c); *see infra*.

STATEMENT OF THE CASE

Subject Matter on Appeal

The Appellant's invention pertains to a bi-directional bilge pump, which is used to remove accumulated water from within a watercraft. *See* Spec. Title, ¶ 1. The bi-directional bilge pump, as compared to traditional bilge pumps having a plunger valve, avoids clogging due to debris, e.g., stick and leaves. *See id.* ¶¶ 2–4. Additionally, the bi-directional bilge pump of the present invention “may include two ball valves, one between the pump inlet and the first chamber, and one that separates the first chamber with the secondary chamber.” *Id.* ¶ 13, Figs. 1–5.

Claims 1, 9, and 16 are the independent claims on appeal. Claim 9, reproduced below, is illustrative of the claimed subject matter.

9. A pump comprising:
 - (a) an outer housing defining an enclosure;
 - (b) a first chamber within said outer housing, the first chamber for receiving fluid admitted into said pump through an inlet, the inlet controlled by a valve having a moving ball with a peripheral surface that defines both a pump entrance for fluid and debris to be admitted into the pump and a valve exit for fluid and debris to escape the valve into the first chamber;
 - (c) a second chamber within said outer housing for receiving fluid from said first chamber; and
 - (d) a piston that (i) selectively controls the flow of fluid from said first chamber to said second chamber and (ii) selectively expels said fluid out of the pump from said second chamber.

Appeal Br. 8–9, Claims App.

Rejections

Claims 1, 2, 5, 7–13, and 15 are rejected under 35 U.S.C. § 102(a)(1) as anticipated by Corson (US 1,746,524, iss. Feb. 11, 1930).

Claims 16, 17, and 20–22 are rejected under 35 U.S.C. § 103 as unpatentable over Corson in view of Hoferer et al. (US 2,137,402, iss. Nov. 22, 1938) (“Hoferer”).

ANALYSIS

Independent Claim 1 and Dependent Claims 2, 5, 7, and 8

Claim 1 recites “[a] pump,” including “[a] valve having a moving ball with a peripheral surface that defines both the valve entrance for fluid and debris to enter the valve from the first chamber and the valve exit for fluid and debris to escape the valve into [a] second chamber.” Appeal Br. 8, Claims App.

The Examiner finds that the claimed “valve having a moving ball” reads on Corson’s valve body 34 and ball 38, and the claimed “second chamber” reads on Corson’s passage 29. Final Act. 6–7 (citing Corson 2:59–3:3, Fig. 2). Passage 29 is a concentric space between plunger 26 and cylinder 17. *See* Corson 2:82–96, Figs. 1–2; *see also* Reply Br. 4. The Appellant argues that ball 38’s peripheral surface does not define the valve exit for fluid and debris to escape the valve into passage 29. *See* Appeal Br. 5; Reply Br. 4.

In view of the foregoing, we consider it useful to construe the disputed claim recitation, “[a] valve having a moving ball with a peripheral surface that defines . . . the valve exit for fluid and debris to escape the valve into [a] second chamber.” Appeal Br. 8, Claims App. When this recitation is read in its entirety and interpreted in light of the Specification as

understood by one of ordinary skill in the art, it refers to the moving ball's peripheral surface providing a limit for the most restrictive space for fluid and debris to escape the valve. *See* Transcript 6:10–15 (mailed Aug. 28, 2020). For example, the Appellant's Figures 1, 2, and 4 show piston 36 with first end 38 including member 42, which has seal 50 and secondary check valve 48 (i.e., ball valve). Spec. ¶¶ 24, 26. Check valve 48 includes a ball, a seat for the ball, and a portion of piston 36's first end 38 that acts as a stop for the upward movement of the ball. As shown in the cross-sectional view of Figure 4, the most restrictive space where fluid and debris can escape check valve 48 is represented by the distance between the peripheral surface of check valve 48's moving ball and the seat for the ball. We note that the most restrictive space is indirectly set by the portion of piston 36's first end 38 that acts as a stop for the upward movement of the ball.

The Examiner offers *two scenarios* of how the peripheral surface of Corson's ball 38's defines a valve exit. Ans. 10. *In one scenario*, the Examiner explains that it appears possible that ball 38 moves upward to contact upper plug 41, which would act as a stopper for ball 38 and, as such, the lower peripheral surface of ball 38 defines the valve exit. *Id.* The Examiner explains that an exit path would be formed between the lower/lateral peripheral surface of ball 38 and the sidewall of plunger 26, which would act to direct the pressurized fluid outwardly so as to reach apertures 39 and ultimately enter passage 29. *Id.* Accordingly, it appears the Examiner contemplates that the valve may include valve body 34, ball 38, and the stopper of ball 38 (i.e., bottom surface of upper plug 41). *See* Corson Fig. 2. Notably, although the Examiner finds that this scenario "is not explicit in [Corson]" (*id.*), the Appellant appears to agree to the

existence of this scenario. *See* Reply Br. 7 (“The mechanical structure that does this in Corson is the entire structure between the seat at the bottom of the valve 33 that the ball valve rests in on the upstroke and the seat at the top of the valve 33 that the ball valve rests in on the upstroke.”). In this scenario, the Examiner’s explanation fails because the most restrictive space where fluid and debris can escape the valve appears to be the entrance to aperture 39. *See* Corson Fig. 2. In this case, it is not pertinent that fluid and debris may follow a path to the entrance to aperture 39 because when ball 38 is in contact with upper plug 41, the entrance to aperture 39 appears to be the most restrictive space where fluid and debris can escape the valve. Therefore, in this scenario, the peripheral surface of ball 38 does not define the valve exit for fluid and debris to escape the valve into passage 29.

In the other scenario, the Examiner explains that when ball 38 is lifted away from its valve seat “pressurized fluid is forced to flow past and around the ball 38 to exit upwardly from the valve.” Ans. 10. The Examiner explains that “a valve exit path is formed between the lateral/upper peripheral surfaces of [] ball 38 and the sidewall of [] valve body 34.” *Id.* However, it is not clear from Corson’s written description and figures that the valve works in this manner. For example, it is unclear if under a specific fluid pressure, ball 38 could move upward without contacting upper plug 41. Therefore, the Examiner’s explanation fails because it appears to be based on speculation.

Thus, we do not sustain the Examiner’s rejection of independent claim 1 and claims 2, 5, 7, and 8, which depend therefrom.

Independent Claim 9 and Dependent Claims 10–13 and 15

Claim 9 calls for a pump that includes:

(b) a first chamber within said outer housing, the first chamber for receiving fluid admitted into said pump through an inlet, the inlet controlled by a valve having a moving ball with a peripheral surface that defines both a pump entrance for fluid and debris to be admitted into the pump and a valve exit for fluid and debris to escape the valve into the first chamber.

Appeal Br. 8–9, Claims App.

The Appellant argues ball 23 of Corson’s valve lacks a peripheral surface that defines “a valve exit for fluid and debris to escape the valve into the first chamber,” as recited in claim 9, because “the pin 2[4] prevents the ball 23 from reaching the exit of the valve 21 into the first chamber.”

Appeal Br. 7; *see* Reply Br. 8. In other words, the Appellant contends that the existence of pin 24 prevents the surface of ball 23 from acting as a valve exit for fluid and debris to escape the valve into the first chamber.

The Examiner disagrees with the Appellant that the existence of pin 24 prevents Corson’s ball 23 from corresponding to the claimed “valve exit.” *See* Ans. 14. The Examiner explains that Corson’s valve exit is shown by the valve outlet path formed between the lateral/upper peripheral surfaces of ball 23 and the sidewall of valve body 21. *Id.* (citing Corson, Fig. 2).

In view of the foregoing, we consider it useful to construe the disputed claim recitation, “[a] valve having a moving ball with a peripheral surface that defines . . . a valve exit for fluid and debris to escape the valve into [a] first chamber.” Appeal Br. 8–9, Claims App. When this recitation is read in its entirety and interpreted in light of the Specification as understood by one of ordinary skill in the art, it refers to the moving ball’s peripheral

surface providing a limit for the most restrictive space for fluid and debris to escape the valve. For example, with reference to the Appellant's drawings, Figures 1–5 show primary check valve (i.e., ball valve) 32, which includes a ball, a seat for the ball, and an arch member that acts as a stop for the upward movement of the ball. As shown in the cross-sectional view of Figure 3, the most restrictive space where fluid and debris can escape primary check valve 32 is represented by the distance between the peripheral surface of check valve 32's moving ball and the seat for the ball. Notably, the most restrictive space is indirectly set by the arch member that acts as a stop for the upward movement of the ball. Additionally, the portions of a valve's structure (e.g., the arch member), which are located above the most restrictive space, do not affect the most restrictive space where fluid and debris can escape check valve 32.

The most restrictive space where fluid and debris can pass Corson's valve 23 is represented by the lateral distance between the widest portion of the ball and the nearest portion of internal wall of valve body 21. The most restrictive space where fluid and debris can pass through valve 23 is not affected by existence of pin 24 and a small portion of valve body 21 above the ball.

Thus, we sustain the Examiner's rejection of independent claim 9 and claims 10–13 and 15, which depend therefrom.³

³ The Appellant argues against the Examiner's rejection of claims 9–13 under 35 U.S.C. § 102(a)(1) as anticipated by Corson. Appeal Br. 6–7. The Appellant does not include claim 15, which depends from claim 9, in this argument. We understand the lack claim 15 in the group of claims 9–13 as a minor oversight.

Independent Claim 16 and Dependent Claims 17 and 20–22

The Appellant acknowledges the rejection of claims 16, 17, and 20–22 (Appeal Br. 3), but does not present an argument for the rejection of these claims. The Appellant states that “[c]laims 1, 2, 5 and 7[–]13 are on appeal,” and presents arguments for the rejection of independent claims 1 and 9, as well as their respective dependent claims. *Id.* at 4–7. This statement suggests that the Appellant views the rejection of claims 16, 17, and 20–22 as not on appeal. However, “[a]n appeal, when taken, is presumed to be taken from the rejection of all claims under rejection unless cancelled by an amendment filed by the applicant and entered by the Office.” 37 C.F.R. § 41.31(c). Therefore, the rejection of claims 16, 17, and 20–22 under 35 U.S.C. § 103 as unpatentable over Corson in view of Hoferer is on appeal. Accordingly, we summarily sustain the Examiner’s rejection of independent claim 16 and claims 17 and 20–22, which depend therefrom.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	References/Basis	Affirmed	Reversed
1, 2, 5, 7–13, 15	102(a)(1)	Corson	9–13, 15	1, 2, 5, 7, 8
16, 17, 20–22	103	Corson, Hoferer	16, 17, 20–22	
Overall Outcome			9–13, 15– 17, 20–22	1, 2, 5, 7, 8

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 IN PART