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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WILLIAM J. DICKHANS

Appeal 2020-000151
Application 15/144,927
Technology Center 3700

Before ANTON W. FETTING, BIBHU R. MOHANTY, and
KENNETH G. SCHOPFER, *Administrative Patent Judges*.

SCHOPFER, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–11 and 15. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Covidien LP. Appeal Br. 1.

BACKGROUND

The Specification discloses that “[t]he present disclosure relates to the use of energy delivery devices. More particularly, the present disclosure is directed to a bag configured for use with systems for cooling energy delivery devices.” Spec. ¶ 1.

ILLUSTRATIVE CLAIM

Claim 1 is the only independent claim on appeal and recites:

1. A kit for use with a recirculating cooling system, comprising:

a bag including a first wall, a second wall opposite the first wall, and a side wall defining a reservoir configured to retain a fluid therein, a first port defined through the first wall and a second port defined through the side wall or the second wall, the bag configured to maximize a temperature differential between a fluid proximate the first port and a fluid proximate the second port, the bag further including a divider which divides the reservoir into a first fluid chamber and a second fluid chamber, the first fluid chamber in fluid communication with the first port and the second fluid chamber in fluid communication with the second port, a portion of the divider being at least semi-permeable to permit fluid to flow between the first fluid chamber and the second fluid chamber, the divider configured to prevent fluid from flowing directly from the first port to the second port,

wherein the bag is collapsible.

Appeal Br. 17.

REJECTIONS²

1. The Examiner rejects claims 1–3 under 35 U.S.C. § 103 as unpatentable over Kaveckis³ in view of Scott.⁴
2. The Examiner rejects claims 4, 5, and 7 under 35 U.S.C. § 103 as unpatentable over Kaveckis in view of Scott and Balding.⁵
3. The Examiner rejects claim 6 under 35 U.S.C. § 103 as unpatentable over Kaveckis in view of Scott,⁶ Balding, and Noda.⁷
4. The Examiner rejects claims 8–10 under 35 U.S.C. § 103 as unpatentable over Kaveckis in view of Scott and Baust.⁸
5. The Examiner rejects claims 8, 11, and 15 under 35 U.S.C. § 103 as unpatentable over Kaveckis in view of Scott and Neilson.⁹

² The Examiner indicates that rejections under 35 U.S.C. § 112 have been withdrawn. *See Adv. Act. 2.* Although the Examiner only references a rejection under 35 U.S.C. § 112(b), we consider this a typographical error as the amendment that obviated the rejection would obviate the rejection under 35 U.S.C. § 112(a) for the same reasons, i.e., because the amendment deletes the language at issue in both rejections. *See Final Act. 2–3; see also Amendment filed July 30, 2018.*

³ Kaveckis et al., US 2014/0276792 A1, pub. Sept. 18, 2014.

⁴ Scott et al., US 2006/0293734 A1, pub. Dec. 28, 2006.

⁵ Balding, WO 01/03606 A2, pub. Jan. 18, 2001.

⁶ With respect to Rejections 3–5, we consider the rejections to also be in view of Scott because the claims rejected each depend from claim 1, although the Examiner does not refer to Scott in the heading or body of any of these rejections. The Examiner also does not provide any explanation as to how the art replied upon cures the deficiency in Kaveckis for which the Examiner relies on Scott in the rejection of claim 1. *See Final Act. 6–10.*

⁷ Noda et al., US 7,097,657 B2, iss. Aug. 29, 2006.

⁸ Baust et al., US 2015/0282858 A1, pub. Oct. 8, 2015.

⁹ Neilson et al., US 6,007,571, iss. Dec. 28, 1999.

DISCUSSION

With respect to claim 1, the Examiner finds that Kaveckis teaches a kit for use with a recirculating cooling system including a bag as claimed, except that the Examiner acknowledges that Kaveckis does not teach that the bag includes a permeable or semi-permeable membrane to permit flow of fluid therethrough. Final Act. 4 (citing Kaveckis ¶¶ 11, 82; Fig. 4). However, the Examiner finds that Scott teaches an air trap in a cooling device that includes a semi-permeable membrane for trapping air bubbles entrained in the circuit before entering the pump. *Id.* at 5 (citing Scott ¶¶ 144, 145, 154; Fig. 11B). The Examiner determines that it would have been obvious to modify Kaveckis' system to include a semi-permeable membrane, as taught by Scott, in order to trap air bubbles in the system before entering the pump. *Id.* The Examiner further explains that this modification would have been advantageous over Kaveckis' method of purging air from the system because it would be less disruptive than stopping the system, reversing the pump, and purging the air. Ans. 10.

We agree with and adopt the Examiner's findings with respect to the rejection of claim 1. *See* Final Act. 4–5; Ans. 10–12.

Appellant first argues that the proposed combination “would render Kaveckis' device unsatisfactory for its intended purpose.” Appeal Br. 7. Appellant asserts that Kaveckis' device is designed to push fluid through the heat exchanger in reverse in order to expel from the system and that Kaveckis teaches a system that ensures that fluid exiting the heat exchanger and entering the pump contains as little air as possible. *Id.* at 8–9.

Appellant argues:

If, as proposed by the Examiner, Kaveckis is modified to include the air trap 685 of Scott, any air disposed downstream of

the air trap 685 would be unable to be forced out of the supply line 14 and heat exchanger cartridge 28 of Kaveckis. Indeed, any air present between the air trap 685 and the pump 30 of Kaveckis would be permitted to travel into the pump, in contravention of purpose of Kaveckis' air purge system.

Id. at 10.

We are not persuaded. The proposed modification by the Examiner includes an alternative means for preventing air from circulating through the system. Even if the purpose of Kaveckis' device may be described as preventing or purging air in the system, this intent is not defeated by the modification proposed by the Examiner. Rather, it is simply performed in a different manner.

Next, Appellant argues that the combination would change the principle of operation of Kaveckis' device. Appeal Br. 10. Appellant asserts that the proposed modification "would change the means by which air is inhibited from entering the pump 30 of system 101/201." *Id.* at 11. We are not persuaded because Appellant has not adequately explained why the principle of operation of Kaveckis' device is related to inhibiting air from entering the pump. Rather, Kaveckis discloses that the invention is related to "systems and associated methods for delivering a cooled fluid during treatment of a patient," which is accomplished by providing "a sufficiently compact and efficient closed loop system that allows for control of the temperature and pressure of a liquid coolant supplied to a treatment device positioned in a patient." Kaveckis ¶¶ 3, 9. Kaveckis further discloses that the heat exchanger may be "a bag removably coupled to the cooling device with a given biasing force for effectuating heat transfer from fluid contained in or traveling through the bag." *Id.* ¶ 11; *see also id.* ¶ 31. Thus, the principle of operation of Kaveckis' device is providing heat exchange by

using a heat exchanger in the form of a bag coupled to a cooling device for providing cooled liquid to a treatment device. Although Kaveckis discloses the use of a reversible pump to expunge air from the system, we agree with the Examiner that this is only described by way of example and as an optional addition to the device. *See* Ans. 11; *see also* Kaveckis ¶¶ 31, 71.

Next, Appellant argues that “Kaveckis has already solved the problem of trapping air bubbles entrained in the circuit before entering the pump” and thus, the reasoning provided by the Examiner for modifying Kaveckis is moot. Appeal Br. 13. However, this argument fails to consider the reasons provided by the Examiner for making the proposed combination. In the Answer, the Examiner explains that one of ordinary skill in the art would have recognized the benefits of the proposed modification to Kaveckis including providing a less disruptive means for preventing air from entering the system. Ans. 10. More specifically, the Examiner finds that one of ordinary skill in the art would recognize that Kaveckis’ system requires that the cooling system be stopped, the pumped reversed, and the system purged of air before cooling treatment can resume. Thus, even though both Kaveckis and Scott provide means for removing or preventing air from entering the system, the Examiner provides a reason why one of ordinary skill in the art would be motivated to modify Kaveckis’ system in view of Scott. Appellant does not address this reasoning.

Finally, Appellant argues that the rejection relies on impermissible hindsight. Appeal Br. 14. However, Appellant merely asserts that this is so because a person of ordinary skill in the art would not have modified Kaveckis to include the air trap of Scott. *Id.* We are not persuaded. Appellant has not explained how the Examiner has relied on any knowledge

gleaned only from Appellant's disclosure in making the rejection. *See In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971).

Based on the foregoing, we are not persuaded of error in the rejection of claim 1. With respect to the rejections of the remaining claims, Appellant argues only that the art of record does not cure the deficiencies in the rejection of claim 1. Having found not such deficiencies, we are also not persuaded of error in the rejections of the dependent claims. Accordingly, we sustain the rejections of claims 1–11 and 15.

CONCLUSION

We AFFIRM the rejections of claims 1–11 and 15.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–3	103	Kaveckis, Scott	1–3	
4, 5, 7	103	Kaveckis, Scott, Balding	4, 5, 7	
6	103	Kaveckis, Scott, Balding, Noda	6	
8–10	103	Kaveckis, Scott, Baust	8–10	
8, 11, 15	103	Kaveckis, Scott, Neilson	8, 11, 15	
Overall Outcome			1–11, 15	

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

AFFIRMED