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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANSGAR WALDBAUR, ARMIN STEINKE, and RALF SCHAEFFER

Application 14/595,947 Technology Center 1700

Before ROMULO H. DELMENDO, KAREN M. HASTINGS, and GEORGE C. BEST, *Administrative Patent Judges*.

BEST, Administrative Patent Judge.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–10, 13, 15, 16, 18, 20, and 21² of Application 14/595,947. Final Act. (October 9, 2018). We have jurisdiction under 35 U.S.C. § 6.

¹ We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies Agilent Technologies, Inc., as the real party in interest. Appeal Br. 3.

² The Revised Appeal Brief ("Appeal Brief"), filed April 3, 2019, erroneously states that claims 14, 19, 22, and 23 were rejected in the Final Action. Appeal Br. 8. These claims have been withdrawn from consideration, Final Act. 1, and are not before us in this appeal.

For the reasons set forth below, we *reverse*.

I. BACKGROUND

The '947 Application describes an arrangement for mounting components in a heating chamber for heating a fluid of the fluid separation apparatus, e.g., an HPLC system. Spec. ¶ 2. The claimed invention is said to enable flexible management of various components in the heating chamber in a user-convenient manner. *Id.* ¶ 7.

Claim 1 is representative of the '947 Application's claims and is reproduced below from the Appeal Brief's Claims Appendix.

1. An arrangement for mounting components in the heating chamber for heating a fluid of a fluid separation apparatus, the arrangement comprising:

a mounting board comprising at least one mounting recess, the at least one mounting recess comprising slanted surfaces forming a V-shape; and

a pre-heater assembly configured for heating the fluid upstream and/or downstream of a separation unit of the fluid separation apparatus, the pre-heater assembly comprising slanted surfaces forming V-shape, wherein the pre-heater assembly is configured to be mountable in the at least one mounting recess,

where in the slanted surfaces of the pre-heater assembly are complementary to the slanted surfaces of the at least one mounting recess such that the pre-heater assembly and the at least one mounting recess have corresponding lateral surfaces substantially covering each other and faces of the lateral surfaces are pressed against each other.

Appeal Br. Claims App. 1.

II. REJECTION

On appeal, the Examiner maintains the following rejection:

Claims 1–10, 13, 15, 16, 18, 20, and 21 are rejected under 35
 U.S.C. § 103 as unpatentable over the combination of Maillet³ and Xie.⁴ Final Act. 2.

III. DISCUSSION

Appellant argues for reversal of the rejection on the basis of limitations present in claim 1 and does not present separate argument for reversal of the rejection of any of the other claims. Appeal Br. 8-15. Accordingly, we select claim 1, the sole independent claim on appeal, as representative of the claims on appeal. 37 C.F.R. § 41.37(c)(1)(iv).

In rejecting claim 1, the Examiner found that Maillet describes each limitation of the claim except for the V-shaped mounting recess and preheater. Final Act. 2-3. The Examiner also found that Xie teaches that chromatography columns can be a variety of shapes, including triangular. *Id.* at 3 (citing Xie ¶¶ 76, 124, 143, 195).

The Examiner offers three reasons why a person having ordinary skill in the art would have modified Maillet's structure in view of Xie's description of a triangular chromatography column *Id.* at 4.

For the reasons set forth below, we determine that none of these reasons is sufficient to justify the combination of Maillet and Xie in the absence of hindsight. *See In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998) (inferring hindsight when the specific understanding or principal

³ WO 2013/028450 A1, published February 28, 2013.

⁴ US 2004/0000522 A1, published January 1, 2004.

within the knowledge of one of ordinary skill in the art leading to the modification of the prior art to arrive at the claimed invention has not been explained).

First, the Examiner found that a person of ordinary skill in the art would have combined Maillet and Xie "to increase the efficiency of heat exchange." Final Act. 4.

This argument is not persuasive because the Examiner has not explained how the change from Maillett's design to the Examiner's proposed combination would increase heat exchange efficiency. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.").

Second, the Examiner also found that a person of ordinary skill in the art would have combined Maillet and Xie "to accommodate the desired shape of the chromatography column." *Id*.

This argument is not persuasive because it assumes that a person having ordinary skill in the art would want to change the shape of Maillet's pre-heating section and column. The Examiner's argument assumes the answer to the critical question and does not provide a sufficient reason to combine references in support of an obviousness rejection.

Third, the Examiner found that Xie establishes that all chromatography column shapes are equivalent. *Id.*; see also Answer 4 (citing Xie ¶¶ 76, 124, 143, 195). Thus, according to the Examiner, using Xie's triangular column in Maillet's chromatography system would have involved the mere substitution of known equivalent structures, which was well within the level of ordinary skill in the art. *Id.* The Examiner also found

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that it would have been obvious to a person of ordinary skill in the art to change the shape of the mounting recess to correspond to the shape of the chromatography column. *Id*.

This argument is not persuasive because the Examiner erred by finding that Xie establishes the equivalence of all chromatography column shapes. We begin by pointing out that the Final Action does not cite any particular portion of the Xie in support of its assertion. *See* Final Act. 4. The portions of Xie cited in the Examiner's Answer do not establish the equivalence of all chromatography column shapes. Rather, these passages state that Xie's method for forming the method for filling the column with a stationary phase by pressurized polymerization can be used in a column of any shape. *See* Xie ¶¶ 76, 124, 143, 195. Thus, the Examiner's statement regarding the known equivalent of various chromatography column shapes is unsupported by evidence in the record.

In view of the foregoing, we reverse the rejection of claim 1. Thus, we also reverse the rejection of claims 2 - 10, 13, 15, 16, 18, 20, and 21.

IV. CONCLUSION

In summary:

(Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
	1–10, 13, 15, 16, 18, 20, 21	103	Maillet, Xie		1–10, 13, 15, 16, 18, 20, 21

REVERSED