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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HUA WANG, ZAMIR ALAM,
HAREESH KUMAR REDDY KOMMEPALLI, NICK ANTONOPOULOS,
JOSE LUIS PLASENCIA CABANILLAS, and KEITH PAUL BIRCH

Appeal 2019-003478
Application 14/721,549
Technology Center 1700

BEFORE LINDA M. GAUDETTE, JEFFREY W. ABRAHAM, and
LILAN REN, *Administrative Patent Judges*.

Per Curiam.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 2, 4–11, and 26. Final Act. 4, 13, 14, 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 “General Electric Company.” Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to a subsurface water treatment system. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A subsurface water treatment system comprising:
 - one or more ultrafiltration membrane units that uses ambient water as a source fluid for producing an ultrafiltrate substantially free of solid particulates having a largest dimension greater than 0.1 microns; and
 - a backwash unit comprising an electrochemical unit, a bidirectional pump, and an ultrafiltrate storage vessel, the electrochemical unit in fluid communication with at least one of the one or more ultrafiltration membrane units for receiving at least a portion of the ultrafiltrate from the bidirectional pump, the electrochemical unit producing an aqueous solution comprising one or more hypohalous acid species, the ultrafiltrate storage vessel in fluid communication with at least one of the one or more ultrafiltration membrane units for receiving at least a portion of the ultrafiltrate from the bidirectional pump, wherein the bidirectional pump delivers the ultrafiltrate from the ultrafiltrate storage vessel to the one or more ultrafiltration membrane units in an opposite direction of flow as the source fluid during a backwash cycle, and
 - wherein the bidirectional pump delivers at least a portion of the ultrafiltrate from the ultrafiltrate storage vessel and at least a portion of the aqueous solution from the electrochemical unit to the one or more ultrafiltration membrane units in an opposite direction of flow as the source fluid during a chemical backwash cycle.

Claims Appendix (Appeal Br. 16).

REFERENCES

The prior art references relied upon by the Examiner are:

Lunde 827	WO 2012/026827 A1	Mar. 1, 2012
Lunde 198	WO 2007/073198 A1	June 28, 2007
Zha	US 2004/0232076 A1	Nov. 25, 2004
Kirker	US 2005/0077227 A1	Apr. 14, 2005
Kent	US 2006/0065596 A1	Mar. 30, 2006
Nupnau	US 2011/0139729 A1	June 16, 2011
Babbitt	US 2015/0104328 A1	Apr. 16, 2015
Kostrzewa	US 2010/0051463 A1	Mar. 4, 2010

REJECTIONS

The Examiner rejects claims 1, 2, and 4–9 under 35 U.S.C. § 103 based on Lunde 827, Nupnau, Kent, Babbitt, and Lunde 198. Final Act. 4.

The Examiner rejects claim 10 under 35 U.S.C. § 103 based on Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Kostrzewa. Final Act. 13.

The Examiner rejects claim 11 under 35 U.S.C. § 103 based on Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Kirker. Final Act. 14.

The Examiner rejects claims 11 and 26 under 35 U.S.C. § 103 based on Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Zha. Final Act. 15.

OPINION

Claim 1²

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Cf. Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010)

² Because Appellant does not argue claims 2 and 4–9 separately, they stand or fall with claim 1. Appeal Br. 8; *see also* 37 C.F.R. § 41.37(c)(1)(iv).

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(precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (“[I]t has long been the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejections.”)). After having considered the evidence presented in this Appeal and each of Appellant’s contentions, we are not persuaded that Appellant has identified reversible error, and we affirm the Examiner’s § 103 rejections for the reasons expressed in the Final Office Action and the Answer. We add the following primarily for emphasis.

On appeal, Appellant acknowledges that Lunde 198 teaches the recited electrochemical unit. Appeal Br. 11. Appellant, however, argues that Lunde 827 teaches that the electrochemical unit is connected upstream of the membrane — which, according to Appellant, “would not be effective to backwash the membrane.” *Id.* From the outset, we are not persuaded by this argument because it is not based on the claim language, which does not require any particular effectiveness of the recited water treatment system. We are also not persuaded by this argument because such an attorney argument is without factual support. *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1581 (Fed. Cir. 1989) (“Attorneys’ argument is no substitute for evidence.”).

Moreover, we note that the Examiner’s rejection is based on the combined teaching of Lunde 827, Nupnau, Kent, Babbitt, and Lunde 198. Appellant’s argument does not address the Examiner’s finding that Nupnau and Kent teach the recited backwash and chemical backwash. *Compare* Appeal Br. 11, *with* Final Act. 7–9; *see also* Ans. 17–18. Appellant’s argument also does not address the Examiner’s finding that Babbitt teaches the recited bidirectional pump. *Compare* Appeal Br. 11, *with* Final Act. 9–

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10; *see also* Ans. 18–19. No reversible error has therefore been identified in this aspect of the obviousness analysis.

Appellant also acknowledges that “bidirectional pumps are known in the art” but argues that there is no teaching or suggestion in Kent or Babbitt that the bidirectional pump “is used during both the backwash cycle and the chemical wash cycle.” Appeal Br. 12. Appellant’s argument is not persuasive because claim 1 recites a water treatment system that includes a bidirectional pump and “the patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 809 (Fed. Cir. 2002). No reversible error has therefore been identified here.

Claim 10

Appellant’s sole argument with regard to claim 10 is that Kostrzewa “adds nothing” to the rejection of claim 1. Appeal Br. 12. We sustain the rejection of claim 10 based on the reasons provided *supra* with regard to claim 1.

Claim 11

Appellant’s sole argument with regard to the rejection of claim 11 based on Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Kirker is that “Kostrzewa adds nothing” to the rejection of claim 1. Appeal Br. 13. We sustain the rejection of claim 11 because Kirker — not Kostrzewa is the additional reference the Examiner cites for this rejection. *See* Final Act. 14. We also sustain the rejection of claim 11 based on the reasons provided *supra* with regard to claim 1.

Claims 11 & 26

Appellant’s sole argument with regard to the rejection of claims 11 and 26 based on Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Zha is

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that Zha “adds nothing” to the rejection of claim 1. Appeal Br. 14. We sustain the rejection of claims 11 and 16 over Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, and Zha based on the reasons provides *supra* with regard to claim 1.

DECISION

The Examiner’s rejections are affirmed.

More specifically,

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 2, 4–9	103	Lunde 827, Nupnau, Kent, Babbitt, Lunde 198	1, 2, 4–9	
10	103	Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, Kostrzewa	10	
11	103	Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, Kirker	11	
11, 26	103	Lunde 827, Nupnau, Kent, Babbitt, Lunde 198, Zha	11, 26	
Overall Outcome:			1, 2, 4–11, 26	

TIME PERIOD FOR RESPONSE

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)(1)(iv).

AFFIRMED