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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ARTEMUS A. SHELTON,
RANDAL S. KRETZLER, JEFFREY REITER,
DANIEL HOLMES, and BENGT I. LARSSON¹

Appeal 2018-000820
Application 14/287,478
Technology Center 3700

Before JENNIFER D. BAHR, MICHAEL L. HOELTER, and
LEE L. STEPINA, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 31–53. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ The Applicant Data Sheet, filed May 27, 2014, identifies Dresser, Inc. (“Appellant”) as the applicant as provided in 37 C.F.R. § 1.46, but the Appeal Brief identifies Wayne Fueling Systems, LLC (assignee of Dresser, Inc.) as the real party in interest. Appeal Br. 1.

THE CLAIMED SUBJECT MATTER

Claims 31, 42, and 50 are independent. Claims App. A–D. Claim 31, reproduced below, is illustrative of the claimed subject matter.

31. A fuel dispensing device, comprising:
- a hose configured to pass fluid therethrough;
 - a nozzle attached to a distal end of the hose, the nozzle being configured to receive the fluid from the hose, the nozzle being configured to dispense the fluid from a distal end thereof, and the nozzle being configured to pass air therethrough such that air is allowed to pass through an opening of the nozzle, the fluid and the air being prevented from mixing together within the nozzle;
 - a housing having a cavity configured to releasably seat the nozzle therein;
 - a heat element configured to heat the air passing through the nozzle;
 - a sensor configured to sense an ambient outdoor temperature; and
 - a controller configured to allow the heat element to provide heat therefrom when the sensed temperature is below a predetermined threshold temperature, and the controller being configured to prevent the heat element from providing heat when the sensed temperature is above the predetermined threshold temperature.

REJECTIONS

- I. Claims 31–39 and 42–53 stand rejected under 35 U.S.C. § 103 as unpatentable over McClelland (US 2016/0280532 A1, published Sept. 29, 2016) and Rennick (US 6,710,302 B1, issued Mar. 23, 2004).
- II. Claims 40 and 41 stand rejected under 35 U.S.C. § 103 as unpatentable over McClelland, Rennick, and Hurko (US 4,808,793, issued Feb. 28, 1989).

- III. Claims 31, 42, 50, and 52 stand rejected under 35 U.S.C. § 103 as unpatentable over Bartlett (US 2012/0024892 A1, published Feb. 2, 2012) and Rennick.
- IV. Claims 32–39, 43–49, 51, and 53 stand rejected under 35 U.S.C. § 103 as unpatentable over Bartlett, Rennick, and McClelland.
- V. Claims 40 and 41 stand rejected under 35 U.S.C. § 103 as unpatentable over Bartlett, Rennick, and Hurko.

DISCUSSION

Rejection I

Independent claims 31 and 50 recite, in pertinent part, “a sensor configured to sense an ambient outdoor temperature” and a step of “sensing an ambient outdoor temperature,” respectively. Claims App. A, C–D. The Examiner found that McClelland lacks a sensor configured to sense an ambient outdoor temperature and a controller configured as claimed, but that Rennick teaches a sensor configured to sense an ambient outdoor temperature and a controller configured as claimed. Final Act. 4. The Examiner determined that it would have been obvious to replace McClelland’s temperature sensing configuration and controller configuration with a sensor configured to sense an ambient outdoor temperature and a controller configured as claimed “in order to avoid the overheat.” *Id.* at 8–9. Expanding on the reason to combine the references, the Examiner adds that McClelland and Rennick “are related as the same technical field (heating element),” and “therefore, it would have been obvious to combine them, in order to avoid overheat.” Ans. 3 (italics omitted); *see also* Adv. Act. 2.

Appellant argues that the Examiner failed “to establish any objective reason with rational underpinning why a person of ordinary skill in the art . . . would have made the proposed modification of McClelland in view of Rennick.” Appeal Br. 10. Appellant contends that the only reasons articulated by the Examiner for the modification are flawed. *Id.* at 10–12. For the reasons that follow, we agree with Appellant that the reasons articulated by the Examiner lack rational underpinnings.

The first reason articulated by the Examiner for the modification is “in order to avoid the overheat.” Final Act. 9. Modifying McClelland by configuring the temperature sensor used to control McClelland’s heating means to sense an ambient outdoor temperature, rather than the temperature of the liquid as McClelland’s temperature sensor 8 does (*see* McClelland ¶ 84), would not play any role in avoiding overheating of either the heating means or the liquid. *See* Appeal Br. 10–14. This articulated rationale (avoiding overheat) might explain why it would have been obvious to modify McClelland’s controller to allow the heat element to provide heat when the sensed temperature is below a predetermined threshold and to prevent the heat element from providing heat when the sensed temperature is above a predetermined threshold. However, it is not apparent, and the Examiner does not cogently explain, why configuring the temperature sensor to sense an ambient outdoor temperature, rather than a liquid temperature, would contribute toward avoiding overheat. Thus, the articulated rationale does not establish an apparent reason, with any rational underpinning, to make this modification.

The Examiner’s observation that both McClelland and Rennick disclose heating elements (Ans. 3; Adv. Act. 2) also does not explain why it

would have been obvious to modify McClelland to configure the temperature sensor to sense an ambient outdoor temperature. Even assuming the presence of a heating element in both references is sufficient to place them in the same technical field, as the Examiner posits (Adv. Act. 2; Ans. 3), this does not establish a reason to combine them.

For the above reasons, Appellant apprises us of error in the Examiner's conclusion that McClelland and Rennick render obvious the subject matter of independent claims 31 and 50. Accordingly, we do not sustain the rejection of claims 31 and 50, or their dependent claims 32–39 and 51 (Claims App. A–B, D), as unpatentable over McClelland and Rennick.

Claim 42 recites “a sensor configured to sense a temperature adjacent the opening of the nozzle.” Claims App. C. Appellant contends, correctly, that the rejection “does not specifically address the language of claim 42, instead addressing claim 42 based on the language of claim 31, which is different language.” Appeal Br. 19; *see* Final Act. 3–4, 8–9 (addressing claims 31, 42, and 50 together with respect to sensing an ambient outdoor temperature, but not addressing sensing a temperature *adjacent the opening of the nozzle*).

In response to Appellant's argument, the Examiner takes the position that McClelland's Figure 4 shows temperature sensor 8 “configured to sense a temperature adjacent the opening of the nozzle (nozzle 4).” Ans. 5 (italics omitted). This position is not well taken. McClelland's Figure 4 shows temperature sensor 8 arranged on flexible pipe connector 40, which connects liquid dispensing circuit 2 to flexible pipe 3. McClelland ¶¶ 85, 93; Figs. 4, 6. McClelland's flexible pipe 3, which is, in reality, much longer than

shown in Figure 4 (“at least 2 m, for instance”), connects liquid dispensing circuit 2 (and flexible pipe connector 40) to nozzle 4. *Id.*, Fig. 4; ¶¶ 75, 78. Thus, temperature sensor 8, located as shown in Figure 4 of McClelland, is substantially separated from nozzle 4 and, therefore, is not configured to sense a temperature adjacent the opening of nozzle 4.

In addressing Appellant’s argument regarding the location of the temperature sensor, the Examiner also reiterates the finding that Rennick’s temperature sensor 132 is configured to sense an ambient outdoor temperature. Ans. 5. This finding is unavailing, for the reasons discussed above in regard to claims 31 and 50.

For the above reasons, Appellant apprises us of error in the Examiner’s conclusion that McClelland and Rennick render obvious the subject matter of independent claim 42. Accordingly, we do not sustain the rejection of claim 42, or claims 43–49, 52, and 53, which depend from claim 42 (Claims App. C, D), as unpatentable over McClelland and Rennick.

Rejection II

The aforementioned deficiencies in the rejection of claim 31 as unpatentable over McClelland and Rennick also pervade the rejection of claims 40 and 41 as unpatentable over McClelland, Rennick, and Hurko. *See* Final Act. 9. The Examiner relies on Hurko for teaching a heat element comprising a heat cable and a positive temperature coefficient, but does not articulate any additional findings or reasoning that would cure the aforementioned deficiencies of McClelland and Rennick. *Id.*

Accordingly, we do not sustain the rejection of claims 40 and 41 as unpatentable over McClelland, Rennick, and Hurko.

Rejection III

In addition to the features of claim 31 discussed above, independent claim 31 recites a fuel dispensing device comprising a nozzle attached to the distal end of a hose, the nozzle “configured to receive . . . fluid from the hose” and “to dispense the fluid from a distal end thereof,” and “configured to pass air therethrough such that air is allowed to pass through an opening of the nozzle, the fluid and the air being prevented from mixing together within the nozzle.” Claims App. A. In addition to the features of claim 42 discussed above, independent claim 42 recites a fuel dispensing device comprising a hose and nozzle having a first passageway extending through both the hose and the nozzle to allow fluid to be dispensed from the nozzle, and the nozzle “including a second passageway extending therethrough and being configured to pass air therethrough such that air is allowed to pass through an opening of the nozzle, the second passageway being adjacent to and independent from the first passageway.”² Claims App. B. In addition to the features of claim 50 discussed above, independent claim 50 recites a step of “allowing passage of fluid through a first passageway of a fuel dispensing system” and a step of “forcing heated air through a second passageway of the fuel dispensing system, the second passageway being adjacent to,” but separate from, the first passageway such that heated air passing through the second passageway heats the fluid within the first passageway, but heated air within the second passageway is prevented from mixing with the fluid within the first passageway. Claims App. C–D.

² We understand the recitation of “the second passageway being adjacent to and independent from the first passageway” to indicate that there is no common pathway among these the two passageways such that their contents might co-mingle.

The Examiner found that Bartlett does not explicitly disclose a temperature sensor configured to sense an ambient outdoor temperature and a controller as set forth in independent claims 31, 42, and 50.³ Final Act. 10. The Examiner did not identify any other elements of claim 31, 42, or 50 as lacking in Bartlett. *Id.* at 10–11. The Examiner relied on Rennick for a sensor configured to sense an ambient outdoor temperature and a controller as recited in the claims. Final Act. 10–11. The Examiner articulated the same reasoning for combining Rennick with Bartlett as the Examiner articulated for combining Rennick with McClelland—namely, “in order to avoid the overheat.” *Id.* at 11.

Appellant argues, and we agree, that Bartlett does not disclose a nozzle, as recited in claims 31 and 42, or a step of forcing heated air through a second passageway adjacent the first passageway to heat the fluid in the first passageway, the second passageway being separate from the first passageway to prevent the heated air from mixing with the fluid, as recited in claim 50. Appeal Br. 28–29, 32, 35. As Appellant argues (*id.* at 28), Bartlett only discloses fluid passing into or through nozzle 206; Bartlett does not disclose passing air through the nozzle. In Bartlett’s system, fluid passes from storage tank 218 through main fluid piping 222, fluid conditioning subsystem 224, flow meter 234, internal fluid piping 238, flow control valve 240, flow switch 242, flow manifold 246, fluid delivery line 252 of fluid

³ Bartlett discloses a temperature sensor for sensing ambient temperature, as well as a control system that receives the temperature information and determines that the fluid should be heated when the ambient temperature falls below a predetermined level, but need not be conditioned when temperatures are at a suitable level. Bartlett ¶ 57. This disclosure appears pertinent to the claimed features the Examiner found lacking in Bartlett.

hose 204, and one-way bypass valve 257, into nozzle 206. Bartlett, Fig. 4; ¶¶ 49, 58–62. Bartlett’s one-way bypass valve 257 is biased to close fluid return line 254 of fluid hose 204 during fluid dispensing, when pressure in nozzle 206 and fluid hose 204 is relatively low. *Id.* ¶ 62. Once dispensing is complete and the customer manually releases the trigger closing the internal dispensing valve of nozzle 206, control system 208 normally closes flow control valve 240 to stop fluid flow to nozzle 206. *Id.* ¶ 65. If control system 208 determines that the fluid temperature and/or ambient temperature is below a predetermined level, control system 208 activates the fluid recirculation subsystem by keeping flow control valve 240 open, causing fluid pressure to build in nozzle 206 and open one-way valve 257, allowing fluid to enter return line 254 of fluid hose 204. *Id.*

In light of the above disclosure, Bartlett provides two passageways in fluid hose 204—fluid delivery line 252 and fluid return line 254, but does not disclose more than one passageway in nozzle 206. Accordingly, Bartlett does not disclose first and second passageways through nozzle 206, as recited in claim 42. Bartlett only discloses fluid (not air) passing into and/or through nozzle 206. Even assuming that Bartlett’s nozzle 206 is capable of receiving and passing air therethrough, Bartlett does not disclose any structure in nozzle 206 that configures it for receiving and dispensing fluid and for passing air therethrough such that the fluid and air are prevented from mixing with each other in the nozzle, as recited in claim 31. The Examiner did not identify, nor do we find, any disclosure in Bartlett of forcing heated air through a second passageway of the fuel dispensing system, as recited in claim 50.

The Examiner did not rely on Rennick for any of the aforementioned features of claims 31, 42, and 50 that we find lacking in Bartlett. Thus, the Examiner failed to establish that Bartlett and Rennick in combination render obvious the subject matter of these claims. Accordingly, we do not sustain the rejection of independent claims 31, 42, and 50, or claim 52, which depends from claim 42 (Claims App. D), as unpatentable over Bartlett and Rennick.

Rejection IV

In rejecting claims 32–39, and 51, which depend from claim 31 (Claims App. A–B, D), and claims 43–49 and 53, which depend from claim 42 (Claims App. C, D), the Examiner found that McClelland teaches, among other things, a hose configured to pass air therethrough and a nozzle configured to receive the air from the hose, and the hose and the nozzle having first and second passageways configured to pass fluid and air, respectively, therethrough without mixing. Final Act. 12–14. The Examiner determined it would have been obvious to modify Bartlett “by including . . . an air supply, a first passageway, [and] a second passageway, . . . as taught by McClelland, in order to prevent the fluid and the air from mixing together.” *Id.* at 15. The Examiner’s reasoning in proposing to add an air supply and to provide first and second passageways as taught by McClelland does not explain why it would have been obvious to provide an air supply in Bartlett. The articulated rationale “in order to prevent the fluid and the air from mixing together” (*id.*) presumes the passage of both fluid and air through the dispensing system, but does not provide a reason why one of ordinary skill in the art would have been prompted to do so in Bartlett’s system.

Thus, the Examiner failed to provide the requisite reasoning to establish that Bartlett, Rennick, and McClelland, in combination, render obvious the subject matter of claims 32–39, 43–49, 51, and 53. Accordingly, we do not sustain the rejection of claims 32–39, 43–49, 51, and 53 as unpatentable over Bartlett, Rennick, and McClelland.

Rejection V

The aforementioned deficiency in the rejection of claim 31 as unpatentable over Bartlett and Rennick also pervades the rejection of claims 40 and 41 as unpatentable over Bartlett, Rennick, and Hurko. *See* Final Act. 16. The Examiner relies on Hurko for teaching a heat element comprising a heat cable and a positive temperature coefficient, but does not articulate any additional findings or reasoning that would cure the aforementioned deficiencies of Bartlett and Rennick. *Id.*

Accordingly, we do not sustain the rejection of claims 40 and 41 as unpatentable over Bartlett, Rennick, and Hurko.

DECISION

The Examiner's decision rejecting claims 31–53 under 35 U.S.C. § 103 is reversed.

REVERSED