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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/329,052	01/25/2017	Xavier Gasso Puchal	84592789	7773
22879	7590	09/24/2020	EXAMINER	
HP Inc. 3390 E. Harmony Road Mail Stop 35 Fort Collins, CO 80528-9544			ZIMMERMANN, JOHN P	
			ART UNIT	PAPER NUMBER
			2853	
			NOTIFICATION DATE	DELIVERY MODE
			09/24/2020	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte XAVIER GASSO PUCHAL, GONZALO GASTON LLADO,
MARIAN DINARES ARGEMI, and JEFFREY ALLEN WAGNER

Appeal 2019-006482
Application 15/329,052
Technology Center 2800

Before TERRY J. OWENS, N. WHITNEY WILSON, and
MERRELL C. CASHION, JR., *Administrative Patent Judges*.

WILSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's June 21, 2018 decision to finally reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Hewlett-Packard Development Company, L.P. (Appeal Br. 2).

CLAIMED SUBJECT MATTER

Appellant's disclosure is directed to a printer with a printhead comprising a number of nozzles, an immiscible fluid applicator, and a processor to instruct the immiscible fluid applicator to apply immiscible fluid onto the printhead to cap the number of nozzles (Abstract). Claim 1 is representative, and is reproduced below from the Claims Appendix:

1. A printer comprising:
 - a printhead comprising a number of nozzles;
 - an immiscible fluid applicator; and
 - a processor to instruct the immiscible fluid applicator to apply immiscible fluid to the surface of the printhead to cap the number of nozzles.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Rhoads et al.	US 2002/0171705 A1	November 21, 2002
Rosenstock	US 4,148,041	April 3, 1979
Silverbrook et al.	US 2006/0250461 A1	November 9, 2006
Le et al.	US 4,734,706	March 29, 1988
Suwabe et al.	US 6,578,947 B1	June 17, 2003

REJECTIONS

1. Claims 1–15 and 20 are rejected under 35 U.S.C. § 103 as unpatentable over Rhoads.
2. Claim 16 is rejected under 35 U.S.C. § 103 as unpatentable over Rhoads in view of Rosenstock.
3. Claim 17 is rejected under 35 U.S.C. § 103 as unpatentable over Rhoads in view of Silverbrook.

4. Claim 18 is rejected under 35 U.S.C. § 103 as unpatentable over Rhoads in view of Le.

5. Claim 19 is rejected under 35 U.S.C. § 103 as unpatentable over Rhoads in view of Suwabe.

DISCUSSION

The Examiner finds that Rhoads teaches a printer comprising a printhead comprising a number of nozzles, an immiscible fluid application, and a processor to instruct the immiscible fluid applicator to apply immiscible fluid to the surface of the printhead to cap a number of nozzles (Final Act. 3–4, citing Rhoads, FIG. 2, ¶¶ 72, 79–82, 92–93). The Examiner further finds that the only difference between Rhoads and claim 1 is that Rhoads calls its processor a “printer controller” or “microprocessor” and a person of skill in the art would have understood that those terms could have been used interchangeably.

With regards to claim 1, Appellant argues that Rhoads does not disclose an applicator for applying a fluid to cap a printhead, but instead provides an application to apply a fluid to clean the printhead (Appeal Br. 9, citing Rhoads, Abstract, ¶ 19). The Examiner finds that Rhoads discloses that one function of its treatment fluid “is that a thin film of fluid, which does not dry, is left on the printhead” (Final Act. 3, citing Rhoads, ¶ 79). Appellant contends, however that nothing in Rhoads teaches or suggests that this film of fluid “caps” the nozzles, as recited in claim 1 (Appeal Br. 9).

Appellant provides four reasons why the disclosure of Rhoads does not teach or suggest that this thin film of fluid caps the nozzles: (1) Rhoads does not explicitly say so; (2) in order to act as a cap, the fluid would have to have sufficient surface tension, viscosity and thickness, as set forth the

Specification, and Rhoads provides no information in this regard; (3) Rhoads explicitly teaches the use of polyethylene glycol as its treatment fluid, while Appellant specifically exemplifies the use of isoparaffin; and (4) Rhoads specifically describes the use of a mechanical capping system suggesting that the fluid left over on the printheads does not function to cap those printheads (Appeal Br. 10, citing Rhoads, ¶¶ 80, 115).

In response, the Examiner construes the term “to cap” to mean “to provide cover with or as if with a cap” (Ans. 6, citing Dictionary.com), and relies on Rhoads’s disclosure that some treatment fluid is left on the printheads as satisfying this definition of “to cap.” In addition, the Examiner also states that the claim limitation “to cap the number of nozzles” is what the claimed device does, and not what it is, and therefore is not, presumably, of patentable significance (Ans. 5).

Having considered the arguments and evidence of record, we determine that the preponderance of the evidence supports Appellant’s position and, accordingly, we reverse the rejection of claim 1 over Rhoads.

First, as explained by Appellant (Reply Br. 4), the phrase “to cap the number of nozzles” is a functional feature of the apparatus claim, essentially describing in a functional manner that the claimed immiscible liquid must have certain features to permit it to “cap” the nozzles. Thus, the phrase “to cap the number of nozzles” is patentably significant.

Second, the claims recite that the immiscible fluid must “cap” the nozzles, meaning that the fluid is “immiscible” with the liquid located in the nozzles (*i.e.* the printer ink). Appellant’s Specification specifically states that an “immiscible fluid” is one which does not mix with another fluid, such as the printer ink (Spec. ¶ 26). By contrast, Rhoads states that its fluid

is intended mix with and/or dissolve the ink (Rhoads, ¶ 13). Accordingly, the evidence of record does not support the Examiner's determination that Rhoads's treatment fluid is an immiscible fluid, as recited in claim 1.

Moreover, as explained by Appellant (Reply Br. 5–6), though Rhoads does disclose that its treatment fluid remains on the printhead (Rhoads, ¶ 79), that disclosure does not necessarily mean that the fluid covers the nozzles - as required by the claim – because the nozzles are essentially holes in the printhead. The Examiner has not pointed to persuasive evidence that treatment fluid on the printhead means treatment fluid covers (or caps) the nozzles. As further explained by Appellant (Reply Br. 6), whether a fluid could do this would depend on its viscosity, surface tension, thickness etc.

Accordingly, we reverse the rejection of claim 1 over Rhoads, and the rejection of claims 2–10, each of which depends, either directly or indirectly, from claim 1. Because claims 15–20 have similar limitations regarding presence of an immiscible liquid to cap the nozzles, we also reverse the rejection of those claims over Rhoads, or Rhoads in combination with one of the secondary references.

With regards to claim 11, Appellant argues that Rhoads does not teach or suggest a subassembly to wipe a layer of immiscible fluid onto the surface of a printhead, as recited in the claim (Appeal Br. 12). The Examiner finds that Rhoads specifically discloses this feature, citing Rhoads's FIG. 12:

Rhoads et al. teaches a printer subassembly comprising: an immiscible fluid applicator (Rhoads et al. - Page 5, Paragraphs 75 & 82) to wipe a layer of immiscible fluid [i.e. wiper will first come in contact with . . . treatment fluid and thereafter wipe across] onto a surface of a printhead [thin film of fluid . . . is left on the printhead] (Rhoads et al. - Page 5, Paragraphs 75, 79, & 82). Figure 12 of Rhoads et al. continues to disclose a

specific example of an immiscible fluid applicator 146 [i.e. dosing wiper] to wipe a layer of immiscible fluid 74 onto a surface of a printhead 30.

(Ans. 9). In response, Appellant argues that Rhoads, for the reasons discussed above, does not disclose “an immiscible fluid applicator,” but rather discloses “a solvent applicator” (Reply Br. 9). In this instance, this argument is not persuasive, as the language of the claims does not provide any function for the claimed structure.² Therefore, the nature of the liquid which might be applied using the claimed applicator is not of patentable significance.

Accordingly, we sustain the rejection of claims 11–14.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–15, 20	103	Rhoads	11–14	1–10, 15, 20
16	103	Rhoads, Rosenstock		16
17	103	Rhoads, Silverbrook		17
18	103	Rhoads, Le		18
19	103	Rhoads, Suwabe		19
Overall Outcome			11–14	1–10, 15–20

² Claim 11 recites: “A printer subassembly comprising: an immiscible fluid applicator to wipe a layer of immiscible fluid onto a surface of a printhead.” Thus, it does not recite capping the nozzles, as is recited in the other independent claims.

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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-IN-PART