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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS PERROUD, DANIEL HOFFMEYER,
ADRIAN SAGER, and ANNE KOPF-SILL

Appeal 2019-006166
Application 14/943,520
Technology Center 1700

Before MICHAEL P. COLAIANNI, GEORGE C. BEST, and
DEBRA L. DENNETT, *Administrative Patent Judges*.

DENNETT, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the
Examiner’s decision to reject claims 1–5 and 10–30 of Application

¹ In our Decision, we refer to the Specification filed November 17, 2015 (“Spec.”) of Application 14/943,520 (“the ’520 Application”); the Final Office Action dated August 7, 2018 (“Final Act.”); the Appeal Brief filed March 11, 2019 (“Appeal Br.”); the Examiner’s Answer dated June 20, 2019 (“Ans.”); and the Reply Brief filed August 19, 2019 (“Reply Br.”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Tecan Trading AG as the real party in interest. Appeal Br. 3.

14/943,520. *See* Appeal Br. 1; Final Act. 1. We have jurisdiction under 35 U.S.C. § 6.

For the reasons set forth below, we AFFIRM.

BACKGROUND

The subject matter of the '520 Application relates to a cover component in a digital microfluidics system. Spec. 1:14. The '520 Application describes that the cover is used to manipulate samples in liquid portions or droplets. *Id.* 1:15. According to the '520 Application, a digital microfluidics system typically comprises a first substrate and a second control unit. *Id.* 1:15–16. The first substrate is said to comprise an array of electrodes covered by a hydrophobic layer. *Id.* 1:16–17; 1:31–32. The central control unit is said to control the selection of individual electrodes and provides each with voltage to manipulate liquid portions or droplets by electrowetting. *Id.* 1:17–20.

Claim 1 is representative of the claims and is reproduced below from the Claims Appendix of the Appeal Brief with key limitations emphasized.

1. *A cover (10) for use in a digital microfluidics system (16) for manipulating samples in liquid portions or droplets; the digital microfluidics system (16) comprising a first substrate (18) and a central control unit (20), wherein said first substrate (18) comprises an array of electrodes (24), and wherein said central control unit (20) is in operative connection to said electrodes for controlling the selection of individual electrodes (22) thereof and for providing a number of said electrodes with voltage for manipulating liquid portions or droplets by electrowetting; in said digital microfluidics system (16), a working gap (30) with a gap height is located parallel to the array of electrodes (24) and in-between first and second hydrophobic surfaces (26,28); the two hydrophobic surfaces*

(26,28) facing each other at least during operation of the digital microfluidics system (16),

wherein the cover (10) comprises on one side the second hydrophobic surface (28) and on another side at least one micro-container interface (32) for safe introducing into and/or withdrawing of liquids from the gap (30); said at least one micro-container interface (32) comprising at least one cone (34), the inner surface thereof being formed such to provide a sealing form fit contact with an outer surface of an inserted micro-container nozzle (36), by which a liquid (48) is transferrable through a fluidic access hole (38) formed into the cover (10) and interconnecting each cone (34) and the gap (30).

Appeal Br. 11 (Claims App.).

REFERENCES

The Examiner relies on the following prior art in rejecting the claims on appeal:

Name	Reference	Date
Lee et al. ("Lee")	US 2013/0134040 A1	May 30, 2013
Bort et al. ("Bort")	US 2014/0161686 A1	June 12, 2014

REJECTIONS

The Examiner maintains the following rejections:³

1. Claims 1–5, 10–12, and 14–30 under 35 U.S.C. § 102(a)(1) as anticipated by Bort. Final Act. 2–12.

³ Because this application was filed after the March 16, 2013, effective date of the America Invents Act, we refer to AIA version of the statutes.

2. Claim 13 under 35 U.S.C. § 103 as obvious over Bort in view of Lee. Final Act. 13–14.

DISCUSSION

Ground 1: Rejection of claims 1–5, 10–12, and 14–30 as anticipated by Bort

With the exception of claim 13, the Examiner rejects all of the pending claims as anticipated by Bort. *See* Final Act. 2–12. Appellant argues that independent claim 1 is not anticipated by Bort, and makes no additional arguments for patentability of the dependent claims 2–5, 10–12, and 14–30. *See* Appeal Br. 7. Thus, Appellant argues the claims as a group. Accordingly, we decide this ground of rejection on the basis of the arguments made in support of patentability of claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner must establish a *prima facie* case of anticipation under § 102 by showing, as a matter of fact, that all elements arranged as specified in a claim are disclosed within the four corners of a reference, either expressly or inherently, in a manner enabling one skilled in the art to practice an embodiment of the claimed invention without undue experimentation. *Clear Value, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1344 (Fed. Cir. 2012); *Sanofi-Synthelabo v. Apotex Inc.*, 550 F.3d 1075, 1083 (Fed. Cir. 2008). Although it is well established that claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, *see, e.g., In re Schreiber*, 128 F.3d 1473, 1477–78 (Fed. Cir. 1997), to satisfy the functional limitations in an apparatus claim, the prior art apparatus must be capable of performing the claimed function. *Id.* at 1478. As such, to establish such capability recited

in claim 1, the Examiner must demonstrate that the prior art's cover of a digital microfluidics system possesses the necessary structure to function as claimed.

Appellant argues, *inter alia*, that the rejection of claim 1 as anticipated by Bort should be reversed because the Examiner errs by finding that Bort describes a digital microfluidics system “comprising at least one cone . . . , the inner surface thereof being formed such to provide a sealing form fit contact with an outer surface of an inserted micro-container nozzle.” Appeal Br. 7.

Bort's Figure 13 is reproduced below:

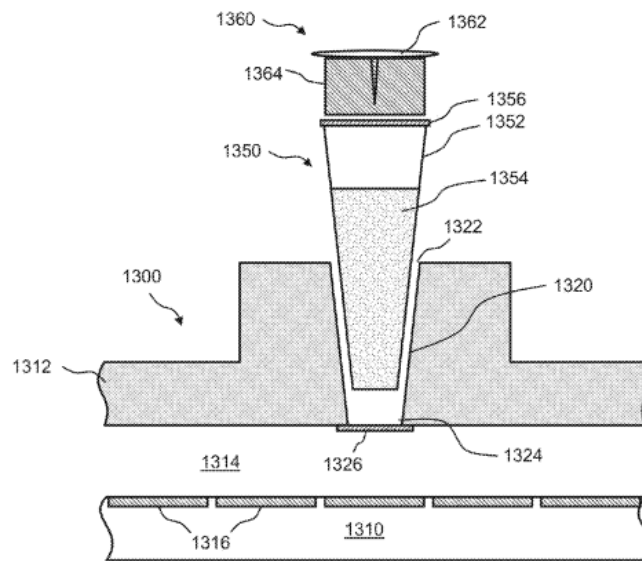


Figure 13

Figure 13 is a cross-sectional view of a pipette-style dispenser for loading liquid into a droplet actuator in a microfluidics device. Bort Abstract; ¶ 15. Figure 13 shows seal 1326, pierceable seal 1356, and Bort describes that a seal is provided at the outlet of barrel 1352. *See id.* ¶¶ 71–73.

The Examiner finds, *inter alia*, that Bort's: (i) top substrate 1312 corresponds to the claimed cover and (ii) loading port 1320 corresponds to the claimed "one micro-container interface . . . comprising at least one cone . . . , the inner surface thereof being formed such to provide a sealing form fit contact with an outer surface of an inserted micro-container nozzle."

Appeal Br. 11 (Claims App.); *see also* Final Act. 2.

Appellant argues that seal features 1326, 1356, and the seal located at 1352 must be broken before liquid 1345 is dispensed as Bort requires air venting "between the walls of loading port 1320 and pipette-style dispenser 1350." Reply Br. 4 (citing Bort ¶ 73). Appellant contends that "this venting out *sharply* contrasts with a 'sealing form fit contact' as required in present claim 1." Reply Br. 4.

We do not find Appellant's arguments sufficient to identify any reversible error in the Examiner's rejection. Because we are in agreement with the Examiner's reasoning and rebuttal to Appellant's arguments on appeal, we adopt them as our own and add the following for emphasis.

We agree with the Examiner that the subject matter of claim 1 is a cover. Ans. 16. Contrary to Appellant's position, the disputed claim does not structurally require or positively recite an inserted micro-container nozzle. Appeal Br. 11 (Claims App.). Thus, it is not dispositive whether Bort actually discloses use of the cover to form a sealing form fit contact with an outer surface of an inserted micro-container nozzle. Ans. 17.

Therefore, Appellant's arguments do not identify reversible error in the Examiner's finding that Bort's "inner surface [1320] of the micro-container interface [] is capable of providing a sealing form fit contact with an outer surface of an inserted micro-container nozzle." *Id.* Simply put, the

claimed cover subject matter encompasses Bort's inner surface 1320, but does not encompass Bort's inserted micro-container nozzle 1352. As to Appellant's argument that the Examiner has erroneously construed claim 1 as requiring a “*hermetic seal*” or a “*seal that prevents the leakage or passage of air*” (Appeal Br. 8), we find that argument moot in view of our conclusion that claim 1 does not structurally require or positively recite an inserted micro-container nozzle.

Appellant's argument that Bort's venting requirement teaches away from claim 1 (*id.* at 9–10; *see also* Reply Br. 4–5) is unpersuasive for two reasons. First, as discussed above, we agree with the Examiner that Bort's inner surface 1320 possesses the necessary structure to function as claimed. Second, “[t]eaching away is irrelevant to anticipation.” *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1380 (Fed. Cir. 2005); *see also Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998) (“A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. Thus, the question whether a reference “teaches away” from the invention is inapplicable to an anticipation analysis.”).

For these reasons, we do sustain the Examiner's § 102(a)(1) rejection of claim 1. For the same reasons, we likewise sustain the rejection of claims 2–5, 10–12, and 14–30.

Ground 2: Rejection of claim 13 as obvious over Bort in view of Lee

The Examiner rejects claim 13 as obvious over the combination of Bort and Lee. *See* Final Act. 13–14. Appellant does not separately argue for the nonobviousness of claim 13. Appeal Br. 7–10; Reply Br. 4–5. Appellant, however, implicitly argues for the patentability of claim 13 based on limitations recited by parent independent claim 1. Appeal Br. 9–10

(arguing that “where [Bort] teaches away from a claimed feature, the cited art is not available for the purposes of an obviousness rejection”); Reply Br. 4–5.

For the reasons set forth supra, Appellant’s teaching away arguments are moot based on the scope of claim 1. We sustain the rejection of claim 13.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–5, 10–12, 14–30	102(a)(1)	Bort	1–5, 10–12, 14–30	
13	103	Bort, Lee	13	
Overall Outcome			1–5, 10–30	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED