

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

DECENT ESPRESSO INTERNATIONAL LTD.,
Petitioner,

v.

DUVALL ESPRESSO IP ENFORCEMENT, LLC,
Patent Owner

Case IPR2024-01492

U.S. Patent No. 10,772,456

**PETITIONER’S REPLY TO PATENT
OWNER’S PRELIMINARY RESPONSE**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

This Reply addresses arguments in Patent Owner's ("PO") Preliminary Response (Paper No. 13, "POPR"), as permitted by the Board's email of March 3, 2025 (permitting a reply not exceeding 7 pages to address claim construction and PO's mischaracterizations of the prior art).

I. Claim Construction – "Inhibiting"

PO's construction of "inhibiting" (at POPR pp. 8-9) is contrary to the intrinsic evidence and the plain meaning. PO argues that "inhibiting" means "'does not allow' any resulting solvent to pass through to the brewing chamber." This is contrary to the specification excerpt that PO quotes: "... the valve 328 is closed thereby preventing or otherwise inhibiting fluid flow." POPR p. 8. As stated, "preventing" fluid flow differs from "inhibiting." *Id.* If they were the same, the applicant would not have differentiated them in the specification. This aligns with the extrinsic evidence, in which "inhibit" can mean "to prohibit", but can also mean "to decrease the rate ..." or "hinder." Ex1024. "Inhibit" is not limited to a valve being closed.

Inhibit should be given its plain and ordinary meaning, e.g., any of prohibiting, decreasing, or hindering, not limited to "does not allow" solvent flow.

It appears that PO's construction of "inhibiting" is intended to support a baseless argument that the prior art does not disclose valves having the claimed "closed state." Ex1001 claim 1. For example, at POPR p. 15, PO states that Coccia

“modif[ies] (but never clos[es]) a flow regulation valve 36.” However, Coccia’s disclosure states explicitly that “the control unit adjusts the outlet opening of the variable-flow valve [36] until the flow rate reaches the optimum value. ... The control unit **closes** the opening of the valve [in other circumstances].” Ex1006 ¶0087 (emphasis added). Similarly, in the other relevant prior art, Anson, “Mixing valve 28 may be a single valve that selectively shuts off or permits flow...” Ex1018 ¶0014.

Both prior art references disclosing the “closed state” of the “resulting solvent valve” will remain relevant regardless of the construction of “inhibiting.”

II. Claim Construction – “A/An”

PO’s proposed construction of “a/an” (at POPR pp. 9-10) ignores the intrinsic evidence, the extrinsic evidence, and black letter claim construction law. PO suggests that “a ... valve” can only be met by a single valve, rather than by one or more valves combined to perform the claimed functions.

However, the Federal Circuit precedent is clear: “This court has ‘repeatedly emphasized that an indefinite article ‘a’ or ‘an’ in patent parlance carries the meaning of ‘one or more’ in open-ended claims containing the transitional phrase ‘comprising.’ The exceptions to this rule are extremely limited: a patentee must evince a clear intent to limit ‘a’ or ‘an’ to ‘one.’” *Convolve v. Compaq*, 812 F.3d 1313, 1321 (Fed. Cir. 2016) (cleaned up). “[A]n exception ‘only arises where the

language of the claims themselves, the specification, or the prosecution history necessitate a departure from the rule.” *ABS v. Cytonome*, 84 F.4th 1034, 1040 (Fed. Cir. 2023). Thus, “a resulting solvent valve” means “one or more valves” satisfying the claimed configuration of having a closed state, and an active state with at least two flow paths.

Moreover, the specification defines “a” as “one or more than one.” *See* Petition p. 35. The specification notes, as to a different valve, “... flow resistance [is] generated by at least one pressure regulation component, e.g., a valve 242,” demonstrating that “a valve” can be more than one. Ex1001 10:22-25. The applicant’s clear intent was that “a” is “one or more,” and is not limited to “one.”

PO proposes its construction as an improper attempt to read the prior art out of the claims. In particular, at Petition pp. 35-39, Petitioner’s analysis of prior art explains that Coccia’s combination of two valves embody the functions of “a resulting solvent valve.” That is, Coccia’s valve 36 embodies “hav[ing] a closed state.” And Coccia’s valve 26 embodies having “an active state that includes a first selective directional flow path ... and a second selective directional flow path ...” Thus, Coccia’s disclosure of the claimed “resulting solvent valve” is in the form of more than one valve that, when combined, embody the claimed functions. Contrary to PO’s argument (POPR p. 10), the claim language does permit the combination of “one or more” valves configured to provide the claimed functionality.

Even if PO's construction was adopted, it would not support ruling in PO's favor regarding institution. Petitioner disclosed that Anson's valve 28 would have been combined with Coccia by a person of ordinary skill. *See* Petition pp. 38-39. Anson disclosed that valve 28 performs the claimed functions, i.e., it "shuts off" or "permits flow to one of multiple outlets." Ex1018 ¶0014. Anson further confirms that a combination of two valves can perform the role of a single valve, stating, "Mixing valve 28 may be **a single valve ... or** may take the form of **two valves ...**" *Id.* (emphasis added).

Thus, while PO's proposed claim construction is wrong, if the Board decides to adopt it, the construction will not be fatal to the petition.

III. PO's Mischaracterization of Prior Art

PO mischaracterizes Coccia's variable flow-valve 36 as not being closable, e.g., stating, "Coccia also does not disclose the hydraulic variable-flow valve 36 having a closed position ..." POPR pp. 29, 15. Coccia explicitly states, "[T]he control unit adjusts the outlet opening of the variable-flow valve... The control using **closes** the opening of the valve..." Ex1006 ¶0087 (emphasis added).

PO also mischaracterizes Coccia's electrovalve 26 as not "permitting flow of the resulting solvent to a removal conduit without passing through the brewing chamber" in two manners.

First, PO relies only on FIG. 2, ignoring the text of the specification. POPR

pp. 13-14. While FIG. 2 includes a symbol for valve 26 that would connect the lower portion of duct 23 to the discharge 27, the specification states that an alternative flow path is contemplated, i.e., the valve “in one position, causes the water to be supplied to [the brewing chamber], and in the other position it discontinues the supply of the water and communicates with a discharge 27 external to the machine.” Ex1006 ¶0046. As expert Tinkler testified, this would have caused a person of ordinary skill to understand that Coccia’s disclosure supported the function shown at Petition p. 40 and Ex1002 p. 50, wherein the water flowed from the system to the discharge. *See also* Ex1002 ¶1 (noting that Tinkler provided testimony from perspective of person of ordinary skill). Coccia supports this understanding further, stating, “Since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described ... all suitable modifications and equivalents may be resorted to...” *Id.* at ¶0115.

Second, PO implicitly takes the position that the lower portion of Coccia’s duct 23 does not contain “resulting solvent” that flows to the “removal conduit without passing through the brewing chamber.” POPR p. 13. However, unless the lower portion of duct 23 had zero volume (an impossibility), that duct would have held “resulting solvent” that never reached the brewing chamber when the solvent was flowing as shown at Petition p. 41. When the valve 26 changed positions,

according to POPR pp. 14-15, the solvent in the lower portion of duct 23 would reverse direction and flow out via discharge 27. The “resulting solvent” in that portion of duct 23 would never have passed through the brewing chamber and, thus, the configuration identified by PO would satisfy the claimed “first [] flow path directing the flow of the resulting solvent to a removal conduit without passing the resulting solvent through the brewing chamber.” Ex1001 claim 1. Claim 1 does not require that a large quantity of resulting solvent be so directed, but only that at least some amount of resulting solvent be so directed. So, even if Coccia was improperly limited by viewing only FIG. 2 and completely ignoring its text, Coccia disclosed the claim limitations.

PO also mischaracterizes the Anson prior art, stating that “Anson does not teach the mixing valve 28 (whether singular or broken into two valves) being upstream of any brewing chamber.” POPR p. 24. Contrary to this, Anson explicitly discloses such a configuration. Anson states, “Mixing valve 28 may ... permit flow to dispensing tube 34 or drain tube 32. ... Water that is directed through the dispensing tube 34 may be further directed out a dispensing device 36 ... Water may then ... be directed directly into another portion of food or beverage making equipment for use in a particular food or beverage making application.” Ex1018 ¶¶0015-0016. Anson’s disclosure further noted, “The apparatus may be used in connection with a variety of beverage making machines used to brew a

variety of beverages. Terms including beverage ... as may be used herein are intended to be broadly defined as including ... the brewing of coffee ... This broad interpretation is also intended to include ... ground coffee, tea, ... powdered beverage concentrate, ...” *Id.* at ¶0011. Thus, Anson explicitly disclosed directing the water from mixing valve 28 into a beverage machine including one for brewing coffee. As expert Tinkler testified, a person of ordinary skill would understand Anson’s valve to be upstream of a brewing chamber. Ex1002 ¶¶49, 89.

Finally, Petitioner notes that PO’s purported expert is not independent, but is the owner of PO and the named inventor of the challenged patent. PO’s purported expert is not a person of ordinary skill in the art and offered opinions based on the wrong standard of proof, i.e., clear and convincing evidence. Ex2001 ¶16 (“I understand that the clear and convincing evidence standard applies to all aspects of an allegation of anticipation or obviousness...”). PO’s purported expert testimony should be given little weight.

IV. Conclusion

As set forth in the Petition and this reply, the IPR should be instituted on all requested grounds.

Respectfully submitted,

By: /s/ Perry S. Clegg/

Perry S. Clegg, Reg. No. 65,304

Appendix of Exhibits for IPR2024-01492 - U.S. Patent 10,772,456

Exhibit	Description
1001	U.S. Patent No. 10,772,456
1002	Declaration of Ian Tinkler, dated September 26, 2024
1003	European Patent Publication EP 2 612 577 A1 (“Buttiker”)
1004	Translation of European Patent Publication EP 2 612 577 A1
1005	Declaration Certifying Translation of European Patent Publication EP 2 612 577 A1
1006	U.S. Patent Application Publication No. 2011/0097454A1 (“Coccia”)
1007	File History for U.S. Pat. App. Serial No. 16/383,607
1008	U.S. Patent No. 8,973,487 B2 (collectively with Ex1009, “Startz”)
1009	U.S. Patent Application Publication No. 2012/0291634A1 (collectively with Ex1008, “Startz”)
1010	U.S. Patent Application Publication No. 2014/0053734A1 (“Santi”)
1011	International Publication No. WO2012/146660A1
1012	U.S. Patent Application Publication No. 2012/0171332A1 (“Lai”)
1013	International Publication No. WO2011/151703A2 (“Majer”)
1014	International Publication No. WO2011/158131A1 (“Porzio”)
1015	File History for U.S. Pat. App. Serial No. 61/742,688
1016	Patent Owner Infringement Contention Pleading
1017	Patent Owner Claim Chart for 456 Patent
1018	U.S. Patent Application Publication No. 2006/0042470A1 (“Anson”)
1019	European Patent Publication 1 986 530 B1 (“Aigner”)
1020	Translation of European Patent Publication 1 986 530 B1
1021	Declaration Certifying Translation of European Patent Publication 1 986 530 B1
1022	U.S. Patent Application Publication No. 2008/0050480 (“Majer II”)
1023	International Publication WO/2013/003891A1 (“White”)
1024	Definition of “inhibit”

CERTIFICATE OF SERVICE

I hereby certify that on March 6, 2025, I caused a true and correct copy
of the foregoing materials:

- Petitioner's Reply to Patent Owner Preliminary Response
- Exhibit 1024

to be served via electronic mail on the following attorneys of record for Patent
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Respectfully submitted,

By: /s Perry S. Clegg/

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