

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROVISUR TECHNOLOGIES, INC.,
Petitioner,

v.

WEBER FOOD TECHNOLOGY GMBH,
Patent Owner.

Case IPR2024-00258
Patent No. 10,647,013

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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1005	U.S. Patent No. 3,848,757 (“Jordan”)
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1008	U.S. Patent No. 2,921,753 (“Lahti”)
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1011	Roisum, D., <i>The Mechanics of Web Handling</i> (1998) (Excerpts)
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I. INTRODUCTION

As Provisur's Petition showed, Weber's application of decades-old technology to its paper-feeding interleavers for meat and cheese processing is not patentable. As the '013 patent states, the principle of applying web handling techniques to a food slicer, to interleave paper between sliced food, was "known." (EX1001, Col. 1:38-40.) Designers had used vacuums to measure looped web material for decades. As early as 1967, artisans understood that loop sensors "are usually in the form" of pressure detectors, which give "simple but reliable" detection of changing loop size. (EX1009, Col. 1:10-72.) Weber claims merely the predictable use of known techniques.

Weber never argues that the proposed combination is missing elements, or that a POSA would not expect success in making it. Nor does Weber argue separately for the patentability of any challenged dependent claim. Rather, Weber limits its challenges to whether there was a motivation to combine known interleaver loop teachings with known loop position sensor teachings. If the Board finds motivation, then all challenged claims are unpatentable.

Weber begins its Response by arguing that the Petition lacks particularity, ignoring that the Board already confirmed Provisur: "enumerates the specific elements... [and] provides credible (and unrebutted) testimony from its expert as to

why one of ordinary skill in the art would have combined the teachings.” (Paper 9, 8.) This argument is entitled to no weight at this stage. The Board should reject Weber’s renewed challenge to particularity.

Substantively, Weber focuses on whether the preferred embodiments of the prior art can and would be put together. As this Board has noted, that is the wrong standard. *Provisur v. Weber*, IPR2024-00269, Paper 8 at 24 (PTAB June 13, 2024). A reference must be considered for all that it teaches or discloses, not just the preferred embodiments. By ignoring what the references *teach*, Weber ignores the law.

Under the correct legal standard, the motivation to combine is clear. Waffner teaches a known sensing technique suitable for use in Müller’s interleavers. That technique uses a beneficial “contacting” sensor, creates a beneficial tensioning force, and adds beneficial features when threading a new roll of material through the machine. The combination is obvious.

No challenged claim of Weber’s patent should survive this review.¹

¹ Certain claim terms have been construed in the parallel district court proceedings. Neither party is requesting construction of those terms in this IPR. Regardless of whether those terms are given their plain and ordinary meaning or the district court’s

II. GROUND 1: CLAIMS 2, 3, 9, 10, 12, 13, AND 16-20 WOULD HAVE BEEN OBVIOUS OVER MÜLLER IN VIEW OF WAFFNER.

Ground 1 of the Petition explained that it would be obvious to use the sensing technique of Waffner in an interleaver as taught by Müller.

A. The Petition Describes Ground 1 With Particularity.

Provisur’s Petition is specific as to the proposed combination. The combination is the concept of adding a “vacuum chamber” with a perforated “contacting surface” and attaching “well-known” components “needed to generate a vacuum and detect the strength.” (Pet., 41-42.) In other words, the combination is to take an interleaver taught by Müller and add a simple sensor.

Weber raised particularity arguments in its Preliminary Response. (Paper 7, 24.) In instituting review, this Board correctly explained the Petition “enumerates the specific elements ... explains in greater detail, with annotated figures, how Müller and/or Waffner teaches each of those claim elements ... [and] provides credible ... testimony from its expert as to why one of ordinary skill in the art would have combined the teachings.” (Paper 9, 8.) And Weber was able to respond. *See*

construction, the prior art references render obvious all challenged claims. Explicit construction is unnecessary. *E.g. Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017.)

Innovex Downhole Sols. Inc. v. Baker Hughes Oilfield Operations, LLC, IPR2019-00158, Paper 45, 80 (PTAB Apr. 13, 2020). Weber’s renewed argument regarding particularity fails again.

Where, as here, a petition “contains a detailed mapping for the claims, and an explanation for the motivation to combine,” the petition “contains sufficient particularity.” *Sage Prods., LLC v. Purewick Corp.*, IPR2020-01426, Paper 30, 50 (PTAB Feb. 14, 2022). A petition can properly leave the specifics of implementation to the discretion of a POSA. *See Xinial Sys. GmbH & Co. KG, v. Medmix Switzerland AG*, IPR2022-01462, Paper 27, 72-73 (PTAB Feb. 21, 2024) (finding the combination was sufficiently particular—and all challenged claims unpatentable—even where a POSA would have had to choose between “hundreds of different designs”); *see also Ontel Prods. Corp. v. Guy A. Shaked Investments Ltd.*, IPR2021-00052, Paper 38, 32 (PTAB April 18, 2022) (finding petition was particular even when “a number of ways” might exist for a POSA to implement the combination). And a petition need not provide separate discussions, claim-by-claim, regarding motivation; Weber’s critique of Provisur’s “omnibus” motivation section is not based in law. *See Google LLC v. Sonos, Inc.*, No. 2023-1259, 2024 WL 2350509, at *3 (Fed. Cir. May 23, 2024) (“no need to establish a motivation to

combine on a claim-by-claim basis when the proposed motivation logically applies to all of the claims”).

None of Weber’s cited authority says otherwise. These cases address the situation where a petition failed to provide any motivation to combine or was completely ambiguous as to which reference taught the claimed elements.² And Weber’s expert admitted that he had not been provided a legal understanding as to what level of particularity the law requires—rather he invented his own, exacting standard and applied it. (EX1037, 91:14-22, 232:3-19.) As such, the testimony of Weber’s expert, applying no standard, adds nothing relevant. There is no need to

² *Shopkick, Inc. v. Novitaz, Inc.*, IPR2015-00279, Paper 7 at 28 (PTAB May 29, 2015) (no motivations); *Truist Bank v. United Servs. Auto. Assoc.*, IPR2023-00143, Paper 15, 23 (PTAB May 16, 2023) (same); *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017) (same); *See In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“conclusory” motivations); *Comcast Cable Comms., LLC v. Proptu Systems Corp.*, 838 Fed. Appx. 555, 557 (Fed. Cir. 2021) (“threadbare” and “boilerplate” motivations); *see also The Walt Disney Co., et al. v. WAG Acquisition, L.L.C.*, IPR2022-01346, Paper 12 at 24-26 (PTAB Mar. 10, 2023) (“no effort” to map features to claim).

revisit the Board’s initial determination that Provisur’s Petition was sufficiently particular. The Petition meets its burden of showing unpatentability.

B. A Contacting Vacuum Sensor is “Technically Compatible” with Müller.

Weber’s expert, Dr. Kurfess, confirmed that his declaration offered no opinions that a POSA would not expect success. (*Id.*, 232:7-9.) During cross-examination, he admitted a POSA would expect success in making the proposed combination. (*Id.*, 191:19-192:14.) To be clear: Weber does not and cannot argue no-expectation-of-success for this combination.

Rather, Weber’s discussion of “technical incompatibility” is based on legally-improper considerations. (POR, 12-21; EX1037, 98:10-11 (“too big... too expensive”).) First, Weber only asked its expert to analyze whether components from Waffner’s preferred embodiment would fit within Müller’s preferred embodiment. Obviousness does not require bodily incorporation and Weber’s assertions are misplaced. Second, Weber asked its expert to analyze the cost of the combination. The law is again clear that “economic” reasoning like this is irrelevant. Third, Weber claims that Waffner does not disclose a “sensor.” This is another improper attempt to limit the teachings of the art to a specific, described embodiment.

1. Waffner’s sensor would fit in Müller’s buffer.

Weber argues Waffner’s sensor would not fit in Müller. (POR. 12-17.) But Müller teaches buffers of different sizes. And even focusing on the single embodiment of Müller that Weber considers, a POSA would have expected success fitting Waffner’s technique in Müller.

The test for obviousness is whether a POSA can “learn enough from the disclosures of the two references to render obvious the claim in suit.” *Orthopedic Equipment Co., Inc. v. U.S.*, 702 F.2d 1005, 1013 (Fed. Cir. 1983). A POSA is assumed to apply ordinary skill to the problem. *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). A reference “must be considered for all that it teaches... not just the embodiments disclosed therein.” *In re Arora*, 369 Fed. Appx. 120, 122 (Fed. Cir. 2010); *Omega Patents, LLC v. BMW of North America, LLC*, 2024 WL 227801, *3 (Fed. Cir. Jan. 22, 2024) (“[o]bviousness is determined based on ‘what the combined *teachings* of the references would have suggested”).

Müller teachings are not limited to a specifically sized buffer. As the Board already noted at institution, although Müller discloses “that a two-buffer system is preferable, Müller clearly discloses that its interleaver system may also operate with only one buffer (i.e., buffer 12).” (Paper 9, 9.) In this embodiment, a POSA would understand that buffer 12 would be larger than shown in the two-buffer embodiment

Weber focuses on.³ And although Müller contains a single sentence stating that buffer 12 is “preferably” small, Müller never suggests that increasing the size of buffer 12 would render the interleaver inoperable.⁴ (EX1036, ¶ 22.) A POSA would understand that interleavers can have loose buffer loops of different sizes. (EX1003, ¶ 77.) To a skilled person, Müller’s disclosure of loose loop 12 would have taught a range of sizes.⁵

Weber ignores the range of sizes taught by the references, and instead focuses on whether Waffner’s technique would work if the loop were the size disclosed in

³ For example, buffer 12 would have to store enough paper material to buffer potential overruns of the material store during shut down—a function handled by buffer 8 in the two-buffer embodiment. (EX1036, ¶¶ 8, 23.)

⁴ In other words, Müller’s one-sentence “preference” does not “teach away” from larger loops. *E.g. Incept LLC v. Palette Life Sciences, Inc.*, 77 F.4th 1366, 1375 (Fed. Cir. 2023) (to teach away, reference must “criticize, discredit, or otherwise discourage;” stating “general preference” is not enough).

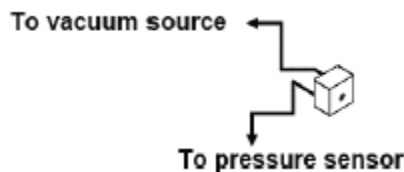
⁵ Weber claims a POSA would not understand Müller’s buffer 12 to be a “loose loop.” (POR, 22.) During cross-examination, Weber’s expert cleanly admitted that in Müller, Jordan, and Waffner each use “a loose loop.” (EX1037, 65:13-66:8.)

Müller’s *preferred* embodiment. (POR, 12-16 (“would not fit”).) The law on this is clear. Whether the features of one reference’s embodiment can be bodily incorporated into the embodiment of the second reference is “basically irrelevant.” *In re Etter*, 756 F.2d 852, 859-60 (Fed. Cir. 1985). It does not matter that a component from one reference’s embodiment would be “too large to fit” in another reference’s embodiment. *E.g. Pulse Elecs., Inc. v. U.D. Elec. Corp.*, 860 Fed.App.x 735, 739 (Fed. Cir., 2021). It does not matter whether the embodiments of the prior art “can be put together” or are “physically combinable.” *Allied Erecting and Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016); *Provisur v. Weber*, IPR2024-00269, Paper 8 at 24 (PTAB June 13, 2024). Yet Weber asked Dr. Kurfess to analyze these irrelevant questions: “whether the **embodiments** of the prior art references would be put together” and “[w]hether the parts ... were **physically combinable**.” (EX1037, 90:15-18 (emphasis added).) And throughout his cross-examination, Dr. Kurfess explained that he was not asked to assess what the references taught. (*Id.*, 90:19-22, 159:7-14, 171:20-172:5, 132:7-21.)

However, even if Müller’s teachings were (contrary to the law) limited to the single preferred embodiment (two buffers, with buffer 12 having “substantially lower” capacity), Waffner’s technique would remain compatible. Dr. Kurfess

admits that, although he performed no analysis to determine the size of the loop in Müller's preferred embodiment. (*Id.*, 174:4-9, 168:15-169:18.) A POSA could implement the teachings of Waffner in such a space.

Waffner's technique does not require a large space. (*Contra* POR, 17-18 (“works only with a long loop”).) Rather, as Dr. Kurfess admitted in cross-examination, a larger vacuum chamber would be *less* effective as a sensor. (EX1037, 182:13-16; EX1036, ¶ 21.) Waffner's technique requires no more than a hollow chamber, a hole drilled into the side, an inlet tube to a vacuum source, and an outlet tube to a vacuum measurement device. (EX1036, ¶ 20.) The vacuum source and vacuum sensor could be located elsewhere. (*Id.*) The sensor would be compact and could easily fit in an interleaver's buffer loop:



Illustrative example of a sensor according to Waffner's teachings

(*Id.*) The variables a POSA would encounter—such as the size of the vacuum box, the strength of the vacuum, and the number of holes—all have a predictable effect on the resulting responsiveness of the sensor and strength of the braking force. (EX1036, ¶ 21; EX1037, 182:3-183:20) Finding a value for such “results-effective” variables is within a POSA's skill. *Cf. In re Applied Materials, Inc.*, 692 F.3d 1289,

1295-99 (Fed. Cir. 2012.) Substituting a small sensor for a larger sensor is not inventive. *Cf. Dow Chem. Co. v. Halliburton Oil Well Cementing Co.*, 324 US. 320 (1943) (holding substitution of large pump for small pump was not inventive).

The only relevant testimony on “technical compatibility” comes from Provisur’s expert, Mr. Jobin, who considered the “teachings” of the prior art, unlike Dr. Kurfess who considered only whether parts from the preferred embodiments were physically combinable. (*Compare* EX2009, 52:19-23; *with* EX1037, 90:15-18.) Mr. Jobin is clear that a POSA would have understood that a sensor based on Waffner’s teachings could be combined with a loose-loop buffer based on Müller’s teachings.

2. Adding a vacuum source and sensor to Müller would be straightforward.

A POSA would add the needed components for a vacuum-based sensor to Müller. (*Contra*, POR, 18, 21.) Weber focuses on the additional expense from adding a vacuum source. (POR, 18.) However, a POSA might expect a vacuum source to already be present in the food-processing environment; Weber’s own patents from this time rely on the availability of a “vacuum source” for use with food slicing equipment. (EX1046, Col. 4:37-48; EX1036, ¶ 26.) Otherwise, a POSA could use a device, such as a venturi vacuum generator, to create the needed vacuum

source from readily-available compressed air. (EX1036, ¶ 28; EX1025, Col. 2:64-66 (teaching use of “fan,” “venturi nozzle” and “vacuum pump” for use in a food slicing machine).)

It is legally irrelevant whether these modifications would increase the price of the equipment. (*Contra*, POR, 18; EX1037, 88:2-10 (“if it’s economically feasible”).) It is well-settled that whether a combination would not be done “by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter is telling on the issue of nonobviousness.” *Grit Energy Sols., LLC v. Oren Techs., LLC*, 957 F.3d 1309, 1323 (Fed. Cir. 2020). Regardless, adding a vacuum-based contacting sensor would not be a particularly expensive modification. (EX1036, ¶ 25; EX1006, 6:50-56 (“inexpensive”); *cf* EX1037, 196:21-197:1, 198:2-13.) At the time of invention, pressure sensors were off-the-shelf commodities. (EX1003, ¶ 83.)

As to Weber’s cursory hygiene argument, (*see* POR, 18,) a POSA would not expect to encounter insurmountable hygiene concerns. The interleaver machine would be isolated from the food processing environment, and the vacuum would only encounter food safe (sterile) paper. (EX1036, ¶ 27.) The sensor components would be unlikely to experience pathogenic harborage. (*Id.*) And a POSA would

know to consult with hygienic experts to ensure a safe and effective cleaning protocol. (EX1003, ¶ 44.)

3. Waffner teaches a pressure sensor.

Weber ignores the full scope of the prior art and a POSA's skill to state Waffner "does not contain any disclosures of a pressure sensor, or manometer." (POR, 20.) But a reference's teachings are not limited to "what is specifically 'mentioned' or 'written' in the reference." *Syntex (U.S.A.) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005). Rather, "[w]hat a reference teaches or suggests must be examined in the context of the knowledge, skill, and reasoning ability of a skilled artisan." *Id.* And there is no dispute that, by the time of the patent, the knowledge of a skilled artisan included knowledge of electronic pressure sensors. (EX1003, ¶ 83.) A POSA would not mindlessly copy Waffner's pneumatic controls into the modified Müller interleaver—instead electronic pressure sensors were well known and affordable by the time of the invention and the POSA would use an electronic vacuum sensor. (EX1003, ¶ 181; EX1036, ¶ 34.)

C. A POSA Would be Motivated to Use Waffner's Sensor Technique in Müller's Interleaver.

When a combination involves using a "known technique" to address a known problem, that combination is *per se* obvious, "independent of whether a skilled artisan would recognize any benefit in making the proposed combination." *Cisco*

Sys., Inc. v. K. Mizra LLC, No. 2022-2290, 2023-1183, 2024 WL 3841809, *4 (Fed. Cir. Aug. 16, 2024). Here, sensing the length of a loose buffer loop is a known problem, and Waffner's teachings are a known technique. The combination is obvious.

Further, a POSA *would* recognize *several* benefits in making the proposed combination. Using Waffner's technique would use a sensing technique in the public domain. Waffner's technique would enhance tension control and stability. And Waffner's technique would improve threading new material at start-up.

1. Waffner teaches a known technique to monitor loop length.

Under the law, motivation exists where one reference discloses a known problem, and a second reference discloses a known technique to address that problem. *E.g. Graham v. John Deer Co. of Kansas City*, 383 U.S. 1, 35 (1966). If a technique is known, the combination is obvious even if a POSA would not recognize "any benefit." *Cisco Sys.*, 2024 WL 3841809, *4. In fact, even if the known technique is worse than other techniques, the use of the known technique remains obvious. *See Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023). As long as the second technique is "suitable" for addressing the problem, it is "not necessary to show that a combination is the *best* option." *Id.*

A POSA would have known that sensing length in a loose buffer was a known problem. To begin with, Müller expressly teaches “[t]he length of the loop is preferably monitored.” (EX1004, [0048].) Other art does as well. (EX1023, Col. 8:46-9:4; EX1005, Col. 6:4-10.) The experts agree that detecting the position of a loose loop was a “known problem.” (EX1037, 75:5-18; EX1036, ¶ 35.)

And Waffner discloses a known technique for sensing loop length. Waffner teaches a “loose loop feed control” that uses a “vacuum signal” to detect when “the loop [] is lengthened” or “shorten[ed].” (EX1006, Col. 5:7-60.) This vacuum-based technique had been disclosed in the art as a “usual” form for loop length sensors. (EX1003, ¶¶ 53-59; *e.g.*, EX1009, Col. 1:63-65.) The experts agree the technique was known. (EX1036, ¶ 36; EX1037, 66:13-67:7.) It would be used for its intended purpose. (EX1036, ¶ 37.) And as discussed above in Section II.B, this technique would be suitable in the interleavers taught by Müller. *Cf. Intel Corp.*, 61 F.4th at 1379.

Weber misconstrues the Petition to argue that the proposed combination is to use two, redundant, sensors. (*Contra* POR, 22-23.) Provisur’s Petition was clear the combination was a “specific way[]” of *implementing* the contacting sensor where Müller was “silent” as to what *type* of sensor to use. (Pet. 39.) Provisur’s combination has a single contacting sensor; there is no redundancy. For this reason,

Weber’s cited case, where the proposed combination involved the *addition* of a redundant component, is inapposite. *South-Tek Sys., LLC v. Engineered Corrosion Sols., LLC*, 748 F. App’x 1003, 1006-07 (Fed. Cir. 2018).

2. A POSA would see a benefit in using a “contacting” sensor like Waffner’s.

In addition to the motivations stated above, a POSA would also prefer to use a “contacting” sensor, as taught in Waffner, over other known sensing techniques. To begin with, Müller expressly states a preference for using a “contacting sensor.” (EX1004, [0048].) Additionally, at the time of the patent, the use of a “non-contact sensor” to determine the length of a loose loop in a food slicing interleaver was patented. (EX1003, ¶ 211; EX1023 (claim 1).) As such, using a contact sensor would reduce potential patent liability. (EX1003, ¶ 212.)

And a POSA would understand that Waffner’s technique is a particularly suitable form of contacting sensor. Waffner teaches a contacting sensor because the sensor requires a “contact surface” to function. (EX1003, ¶ 208; EX1036, ¶ 30; *cf.* EX1037, 69:5-12.) And other forms of contacting sensor would not be suitable in Müller’s interleaver. (EX1036, ¶¶ 31-33; EX1037, 108:10-109:20 (“you’re certainly not going to use a limit switch there.”).)

Weber attempts to circumvent this argument by insisting that Waffner’s sensor is not a contacting sensor, and a photelectric beam sensor is. (POR, 18-19;

EX1037, 68:12-18.) Weber’s position is untenable. A POSA would understand that “[a]s the name indicates, [a contact sensor] is a sensor measuring the position of a target by directly contacting it.” (EX1038.) Weber’s own cited “Sensor Technology Handbook” confirms this, listing sensors that make actual contact with the target (e.g. “limit switch” and “resistive position transducers” as “contact” sensors, and listing “photoelectric sensors” as “non-contact” sensors. (EX2008, p. 4; EX1036, ¶¶ 29-30.) Forced to defend this inconsistency in cross-examination, Dr. Kurfess wildly claimed that a true POSA “wouldn’t bother opening the [Handbook].” (EX1037, 105:12-110:15.)

Weber’s made-for-litigation definition not only contradicts the Handbook, it contradicts [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] A sensor

using Waffner’s technique is a contacting sensor, and a POSA would have seen a benefit in using that technique.

⁶ [REDACTED]

3. A POSA would understand that Waffner's technique improves tension control and stability.

Waffner's vacuum technique would improve tension control and stability. It would do so in a known (and obvious) way.

Müller's buffer would present a POSA with known problem. Müller involves a web-handling system where material is rapidly accelerated out of a buffer loop and into a cutting blade, and then just as rapidly decelerated. (EX1003, ¶¶ 52, 69, 203, 227; EX1036, ¶ 42.) It was known that in web cutting systems similar to Müller's "rapid deceleration" results in "inertia loading on the web [] significantly larger than the tension force provided." (*E.g.*, EX1014, [0002]-[0003]; EX1003, ¶ 221.) In other words, even after the withdrawing had stopped, paper could continue travelling up and out of the loop. This was a known problem for POSAs. (EX1037, 77:13-18, 77:19-22, 114:14-115:6.)

A known solution to this problem was to draw the web over a vacuum chamber as it exited the buffer. (EX1036, ¶ 43; EX1037, 77:19-22.) A POSA would be aware of abundant examples in the prior art where paper was braked by vacuum suction after leaving a buffer loop and before being rapidly accelerated/decelerated into a cutter. (EX1014; EX1017; EX1025; EX1003, ¶¶ 60-61; EX1036, ¶ 43.) Waffner's technique would address this known problem in the known way, because

Waffner requires the web to be drawn over a vacuum chamber. (EX1003, ¶¶ 218-28.)

Weber raises two arguments against this benefit; both arguments get the facts wrong. First, Weber states Müller’s loop “is not subject to” low-tension effects, and would not realize “the benefit of a vacuum system in tension control.” (POR, 27.) Second, Weber argues that Müller already has a brake, making a vacuum brake redundant. (POR, 27-28). Weber’s arguments are unconvincing.

Weber argues that Müller’s “small” loop would be held at such “greater tension” than Waffner’s loop that it would not experience flutter. (POR, 26-28.) Yet Weber’s “inherently ... greater tension” argument was apparently not based on any analysis from Dr. Kurfess. (*Compare* POR, 27; *with* EX1037, 142:3-9, 141:13-2, 142:10-16.) Simple calculations available to a POSA prove Weber’s attorney-argument wrong. (EX1036, ¶¶ 45-46; EX1037, 142:17-21.) Even Dr. Kurfess eventually confirmed that Weber is incorrect and Müller’s loop would have a “pretty low tension.” (EX1037, 139:6-11.) Müller’s loop is held at “exceptionally light tensions.” (EX1011, p. 61; EX1036, ¶ 46.) And Dr. Kurfess admits that tension issues are “inherent” in such a loose loop system. (EX2007, ¶ 58; EX1036, ¶ 48.) Regardless, the art is clear that inertial effects from rapid acceleration can overcome even high tensions, such as those from “commonly used [] tensioning device[s].”

(EX1014, [0002]; EX1003, ¶ 221.) And Müller itself describes its buffer as only “somewhat” capable of preventing tension-related damage. (EX1004, [0026].) A POSA would not look at Müller and assume that Müller’s loop size resulted in *perfect* tension control and stability that could not *in any way* be improved through a vacuum brake. (EX1036, ¶¶ 42-46, 49.)

Weber’s second argument is wrong as well, because Weber points to an irrelevant area of Müller. Although Müller describes a “braking means” throughout the reference, that brake is associated with the *cartridge* area, not the loop area.⁷ (EX1004, [0005], [0015], EX1036, ¶ 47.) In Müller, the cartridge is isolated from buffer 12 by drive means and roller 11. (EX1036, ¶ 47; EX1037, 152:16-158:17, Appendix A.) Whether and how the cartridge is braked is irrelevant to addressing the tension issues at buffer 12. (EX1036, ¶ 47.) The buffers are isolated from the reel, and the brake is irrelevant to tension in buffer 12.

⁷ This Board recognized as much in its institution decision in related Case No. IPR2024-00269: “the portions of Müller that Weber identifies concern only whether a brake might be used *on the interleaver reel*.” (Paper 8, 25) (emphasis added and cleaned up).

4. A POSA would understand that Waffner's technique would improve loading new paper.

Adding the vacuum components required by Waffner's technique would improve threading (the task of loading a new roll of paper during set-up) as explained in the Petition. (Pet. 40; EX1003, ¶ 216.) During threading, the vacuum could be activated. This would allow a machine operator to pin the loose end of the paper reels against the vacuum plate, confident that the paper would stay put. (EX1036, ¶¶ 38-40; EX1037, 195:12-21.) This would be beneficial, for example, if the operator needed both hands free to adjust a different area of the machine. (*Id.*) It does not matter that this benefit would be localized to one part of the machine. (*Contra* POR, 26.) An improvement is still an improvement.

III. GROUND 2: CLAIMS 2, 3, 9, 10, 12, 13, AND 16-20 WOULD HAVE BEEN OBVIOUS OVER JORDAN IN VIEW OF FUKUCHI.

Ground 2 of the Petition explained that a POSA designing an interleaver system for a slicer would find it obvious to use techniques taught by Jordan (feeding material from a spool to a loop store to a cutting region) and techniques taught by Fukuchi (a two-part removal device and a vacuum-based sensor). The combination of those techniques meet every element of each challenged claim.

Weber argues that Jordan's specific disclosed embodiment does not have a cutting region as claimed. This is another legally-improper attempt to limit the teachings of a reference to one embodiment.

Weber further argues that the Petition did not explain the motivation to use Fukuchi's two-part device. But the Petition cited to expert testimony proving the advantages of Fukuchi's teachings. Weber's attorney argument to the contrary is unpersuasive.

A. Express claim construction is unnecessary.

Weber argues that the preamble of claims 2, 17, and 19 is limiting, and that the scope of those preambles requires “food product *and* the corresponding interleaver material are cut in the cutting region.” (POR, 31-35.) The proposed combination of Jordan with Fukuchi renders this element obvious. Because the claims are obvious whether or not the preamble is limiting, the Board need not expressly construe the preamble. *E.g. Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017.)

B. Jordan teaches a slicer where food product and interleaf material are cut together.

Weber again attempts to limit the references to what is disclosed in a single preferred embodiment, rather than to what the reference teaches a POSA. In evaluating obviousness, “[w]hat a reference teaches a person of ordinary skill is not [] limited to what a reference specifically ‘talks about’ or what is specifically ‘mentioned’ or ‘written’ in the reference.” *Syntex*, 407 F.3d at 1380. Rather, “[w]hat a reference teaches or suggests must be examined in the context of the knowledge,

skill, and reasoning ability of a skilled artisan.” *Id.* As with all aspects of an obviousness analysis, the skilled artisan exists *at the time the invention was made* (not, for example, at the time a reference was published). 35 U.S.C. §103(a).

The record is clear and unchallenged that, at the time of the invention, the conventional way of interleaving was to cut food slices and interleaves together in the same cutting region. Spanning 1986 through 2017, *each* example of an interleaver in the record shows food and paper cut at the same blade. (EX1003, ¶¶ 65-74.) At the time of the ’013 patent, the “basic principle of an interleaver” included “using a single blade to slice the food product and sever an interleaf from the paper.” (*Id.* ¶ 75.) A POSA encountering Jordan in 2017 would understand that Jordan web handling disclosures were applicable in modern interleavers. (EX1036, ¶¶ 50-54.)

Rather than challenge the facts, Weber misstates the law. Weber repeatedly calls the Petition’s Ground 2 “legally flawed.” (POR, 4, 30, 37.) Yet Weber does not cite a single legal authority to explain what this “flaw” is. And binding legal authority refutes Weber; obviousness is analyzed according to the knowledge of a POSA at the time of the patent. 35 U.S.C. §103(a); *Syntex*, 407 F.3d at 1380. Provisur is not “pretend[ing]” that Jordan’s specification talks about a cutting region where meat and paper both are cut. (*Contra*, POR, 38.) Provisur simply follows the

law that a POSA brings the full scope of her knowledge, at the time of the patent, when analyzing the teachings of the art.

The Federal Circuit recently reversed a PTAB decision where the Board used the framework Weber applies. Weber suggests that a POSA would build the “actual system” show in Jordan’s drawing and then attempt “the substantial undertaking” to convert that system into a modern system. (*Contra*, POR, 40.) In *Netflix, Inc. v. DivX, LLC*, the Board, like Weber, considered one reference as a “system.” 2023 WL 2298768, at *4 (Fed. Cir. March 1, 2023). This was the wrong analysis; the reference should have been considered for “everything it *teaches*,” rather than as a specific “system.” *See id.* Treating the reference as a “system” was “a fundamental legal error.” Weber commits the same fundamental error.

C. The Petition Describes Ground 2 With Specificity.

Provisur’s Petition was specific. Weber’s vague assertion that the Petition “fundamentally fails to explain how Jordan and Fukuchi are to be combined” is unpersuasive. The Petition maps the features of the references to the claims of the patent. (Pet., 55-63.) And the Petition explains the motivations for combining these teachings. (Pet., 63-67.) As discussed in Section II.A, this is sufficient specificity under the law. *See, e.g., Xinial Sys.*, IPR2022-01462, Paper 27, 72-73.

Weber’s nevertheless argues that the Petition was insufficiently specific as to the “removal device” element. Weber is wrong. The Petition specified that the combination included a two-part removal device as taught by Fukuchi. (Pet., 57.) And the Petition cited to expert testimony explaining why a POSA “would view this as an advantage.” (Pet., 58; EX1003, ¶¶ 433-434.) This is what the law requires. *Sage Prods.*, IPR2020-01426, Paper 30, 50.

To reiterate: the advantage of using Fukuchi’s two-part removal device teachings in the combination is that “tension on the material leaving the material store [can be] controlled to a different value than tension on the material entering the loop store.” (EX1003, ¶ 434.) A POSA would view this as a benefit because unreeling and buffering may be best-performed at different tensions. (*Id.*) Failure to control tension using a two-part removal device could lead to flops, flutters, shifts, traction loss, wrinkling, and entanglement. (EX1003, ¶ 411.)

Weber tries to discount this motivation by arguing that the Petition did not identify this evidence with specificity. (POR, 44-45.) However, the Petition cited directly to the relevant paragraph of EX1003. (Pet., 58 (citing EX1003, ¶¶ 433-434.) This is not a case where “argument is raised solely in [the expert’s] Declaration and not also in the Petition.” (*Contra* POR, 44-45 (citing *Department of Justice v. Discovery Patents, LLC*, IPR2016-01039, Paper 10 at 8 (PTAB Nov. 15, 2016).)

The cases Weber cites are not relevant here, where the Petition specifies the precise paragraphs of evidence relevant to the motivation argument.

Weber's second argument is that the motivation that Mr. Jobin identified is redundant. (POR, 45-46.) This is pure speculation by Weber's attorneys; they do not cite any discussion by their expert in support.⁸ As Provisur's expert explains, Weber's attorneys are incorrect. The tension control provided by Fukuchi's teachings would be in addition to, not redundant of, the tension control in Jordan. (EX1036, ¶¶ 55-59.)

IV. CONCLUSION

Provisur requests cancellation of claims 2, 3, 9, 10, 12-13, and 16-20 of the '013 patent.

⁸ Other than stylistic edits, Weber's argument today is copied word-for-word from the Preliminary Response (which was filed before Dr. Kurfess submitted a declaration). (*Compare*, Paper 7, 32-35; *with* POR, 42-46.)

Respectfully submitted,

Dated: December 17, 2024

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CERTIFICATE OF COMPLIANCE

The undersigned certifies that this brief complies with the applicable type-volume limitations of 37 C.F.R. § 42.24. Exclusive of the portions exempted by 37 C.F.R. § 42.24(c), this brief contains 5,547 words as counted by the word processing program used for its preparation (Microsoft Word 2013).

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CERTIFICATE OF SERVICE

I hereby certify that on December 17, 2024, I caused a true and correct copy of the foregoing materials:

- **PETITION'S REPLY TO PATENT OWNER RESPONSE**

To be served via electronic mail in its entirety on:

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