

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROVISUR TECHNOLOGIES, INC.,
Petitioner,

v.

TEXTOR MASCHINENBAU GMBH,
Patent Owner.

Case IPR2024-00224
U.S. Patent No. 9,457,487

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,457,487**

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PETITIONER EXHIBIT LIST

EX	Description
1001	U.S. Patent No. 9,457,487 B2
1002	File Wrapper for U.S. Patent No. 9,457,487 B2
1003	Expert Declaration of Dr. John M. Collins, Ph.D. in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,457,487
1004	JPH 06 117905 (“Konishi”)
1005	WO 03/065786 (“Lindee”)
1006	U.S. Patent No. 9,296,120 B2 (“McLaughlin”)
1007	U.S. Patent Publication No. 2009/0188358 (“Hansen”)
1008	U.S. Patent No. 5,499,719 (“’719Lindee”)
1009	U.S. Patent Publication No. 2006/0196328 (“Pryor”)
1010	U.S. Patent No. 4,570,729 (“Rosso”)
1011	U.K. Patent Application No. GB 2 352 675 (“Doe”)
1012	U.S. Patent Publication No. 2010/0275789 (“Lee”)
1013	U.S. Patent Publication No. 2005/0279228 A1 (“Julian”)
1014	U.S. Patent Publication No. 2007/0214969 (“Mueller”)
1015	U.S. Patent No. 6,640,681 (“Weber”)
1016	U.S. Patent No. 6,201,218 (“Chandler”)
1017	U.S. Patent No. 5,704,265 (“Johnson”)
1018	U.S. Patent No. 8,408,109 (“Lindee109”)

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1023	WO 2011/056602A1 (“McLaughlin602”)
1024	U.S. Patent No. 6,578,705 (“Lunghi”)
1025	U.S. Patent No. 4,570,729 (“Del Rosso”)
1026	EP0713753B1 (“Lindee753”)
1027	WO2003103906A1 (“Pryor906”)
1028	U.S. Patent No. 7,603,936 (“Pryor936”)
1029	U.S. Patent No. 5,628,237 (“Lindee237”)
1030	PowerMax3000 Slicer Operating Manual
1031	PowerMax4000 Slicer Operating Manual
1032	Dr. Collins CV
1033	U.S. Patent No. 8,549,966 (“Hansen966”)
1034	Automation in the Food Industry

I. INTRODUCTION

Petitioner respectfully requests *Inter Partes* Review of claims 1-4, 6, 9-10, 14-16, and 22 of U.S. Patent No. 9,457,487, filed December 2, 2013 and purportedly assigned to Patent Owner Textor Maschinenbau GmbH.

The '487 patent describes a simple “removable conveyor belt unit.” The conveyor belt unit is removed by relaxing its drive belt; it is installed by tightening the drive belt. The patent alleges cleaning and space saving benefits. Yet, these features were all common and well known in the food processing equipment industry long before the '487 patent.

This Petition presents four separate grounds of unpatentability based on two base references.

First, the claims are anticipated by JPH06117905 to Konishi (published April 28, 1994). Konishi teaches a removable conveyor unit for confectionary machinery with all of the claimed elements of claims 1, 6, 9, 15, and 16.

Second, if the '487 patent “slicing apparatus” preamble is considered a limitation on claim scope (which it is not), the claim would have been obvious based on Konishi in light of numerous slicers with removable conveyors, such as Petitioner’s WO03/065786 to Lindee (published August 14, 2003). Improved maintenance, cleanliness, and efficiency were reasons stated in the prior art to make

such an easy combination and apply the teachings of Konishi in the context of a slicer.

Third, the claims are obvious in view of Petitioner's U.S. Patent No. 9,296,120 to McLaughlin (filed October 26, 2010). (EX1019, 9.) McLaughlin shows a removable conveyor unit for a slicer, and it would have been obvious to a POSA that it worked in the same way as the claimed removable conveyor.

Fourth, the claims are obvious in view of McLaughlin and Konishi. McLaughlin shows a removable conveyor unit for a slicer, and Konishi describes in detail the claimed relaxing/tightening conveyor unit removal process.

There is a high likelihood that Petitioner will prevail with respect to each of the challenged claims and, therefore, Petitioner requests that the Board institute trial. Petitioner has paid the required fee under 37 C.F.R. §§ 42.15(a) and 42.103. Please assess any fee deficiency or credit to Deposit Account No. 232405.

II. BACKGROUND OF THE '487 PATENT-AT-ISSUE

A. Historical Conveyor Systems

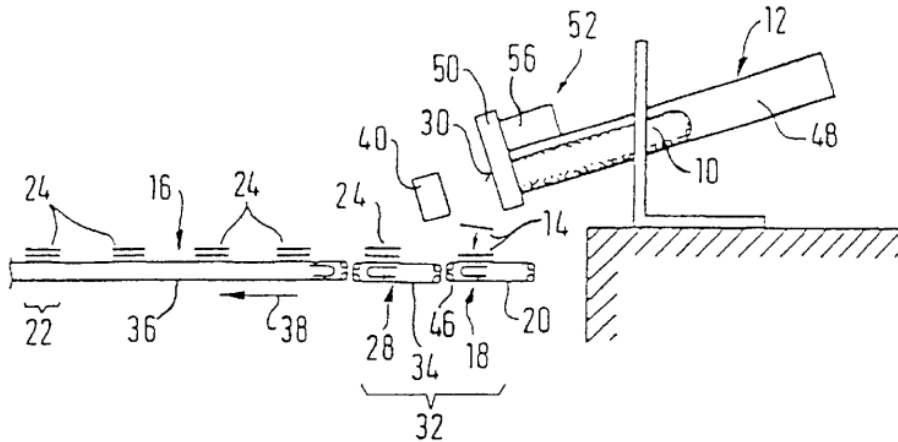
Conveyance systems such as in the '487 patent were well-developed in the food processing industry by the time the alleged of invention around 2012. (EX1003, ¶36; EX1004; EX1005; EX1006.) Food processing equipment has used conveyors to transfer food product for decades since the 1980s. (EX1003, ¶36; EX1010, 1:5-11.) The desire to "increase throughput," efficiency, and productivity

while making cleaning and maintenance easier drove improvements to conveyors in the industry. (EX1003, ¶36; EX1013, ¶8 EX1012, [0020] EX1004, [Purpose]; EX1014, [0002].)¹

Long before 2012, several types of food processing equipment—including slicers—used driven conveyors to convey food. (EX1003, ¶37; EX1008, Abstract; *see also* EX1007, Abstract; EX1033, Abstract; EX1014, ¶3.) For example, by 1996, Petitioner used conveyors in its slicers. (EX1003, ¶37; EX1008, Abstract.) By 2007, Petitioner used conveyors in slicers with three or more independently driven lanes. (*See* EX1003, ¶37; EX1007, Abstract, [0008].)

Patent Owner Textor’s parent company, Weber Maschinenbau GmbH, has used conveyors in its food processing equipment since at least 2003. (*See* EX1003, ¶37; EX1015, 2:67-3:4.)

¹ This background, and the Grounds of Unpatentability herein, are supported by the Declaration of Petitioner’s expert, Dr. John Collins, who has over forty years of experience related to the kinds of mechanical systems at issue here. (Ex. 1003, ¶¶9-21.)



EX1015, Figure 1a.

Further, it was known that conveying multiple food loaves towards a cutting plane can increase throughput and productivity. (EX1003, ¶38; EX1013, [0008], [0035]; EX1009, Abstract; EX1014, [0002].) Using two independently driven conveyors for each lane of a food slicer was known before 2012, as shown by Petitioner's own patents. (EX1003, ¶38; EX1007, Abstract, [0008].)

B. Using Removable Conveyors in Food Slicing Machines was Known

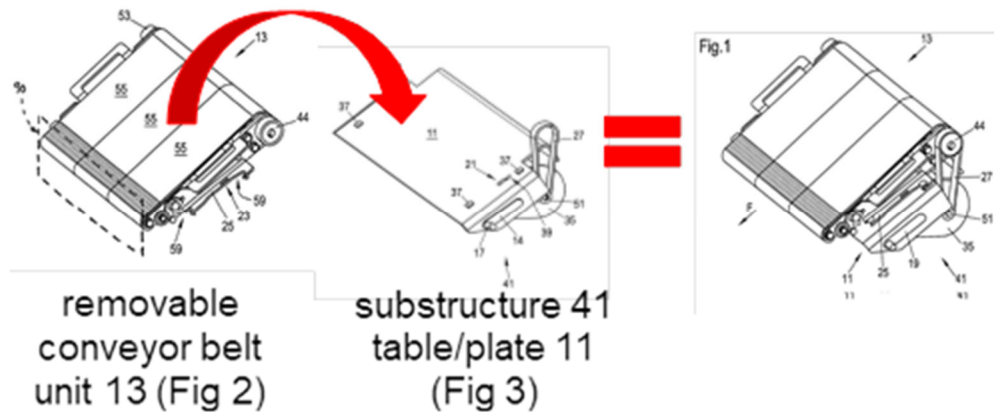
Before the alleged invention around 2012, conveyor belts in slicing machines were removable to allow upkeep of the machine. (EX1003, ¶39; EX1007, [0224]-[0226]; EX1004, [0004]; EX1011, 7-8.) The upkeep, for example, could include maintenance, cleaning, or belt replacement. (EX1003, ¶39; EX1016, Abstract.)

Those in the art knew several methods for how to remove the conveyor belts from food processing equipment. (EX1003, ¶39.) For example, one type of food

processing equipment “includes a mechanism that responds to manual pushing of the idler roller to shift the idler shaft between a drive position and a belt slack position that allows easy and quick installation or removal of the endless belt.” (EX1016, Abstract.) Some conveyor removal systems facilitated quick-and-easy removal of the conveyor belt while other systems facilitated quick-and-easy removal of the entire conveyor belt assembly, including the frame. (EX1007, FIG56-FIG58, [0224]-[0226]; EX1003, ¶39.) Frame removal provided further easing maintenance and cleaning. (EX1003, ¶39; EX1004; EX1016, Abstract; EX1007 Abstract, [0008].)

C. The '487 Patent Specification

The '487 patent discloses “a slicing apparatus for food products” that includes “a removable conveyor belt unit.” (EX1001, Abstract, 2:25-26). The removable conveyor belt unit includes a track and a base. The base allows the conveyor belt unit to “be mechanically attached to a substructure of the belt conveyor.” (EX1001, 2:48-54.)



(EX1003, ¶62.)

The removable conveyor belt unit mounts on a “substructure.” (*Id.*, 7:30-37.) The substructure “includes the mount” and is “provided with a drive motor.” (*Id.*, 8:20-29.) The “cooperation” of the conveyor belt unit and substructure allows three claimed processes: “(i) the movements of the conveyor belt unit 13 required for the removal and for the installation of the conveyor belt unit 13; (ii) the unlatching and the latching of the conveyor belt unit 13; and (iii) the cancelling and the establishing of the coupling between the drive 15 and the conveyor belt unit 13.” (*Id.*, 8:39-46.)

The ’487 patent uses well-known components to allow removal of the conveyor unit. In addition, the benefits touted by the ’487 patent—that removable conveyors “makes a cleaning possible which is as simple as possible with a space-saving and inexpensive manner of construction” (EX1001, 2:20-24)—were already known in the food processing industry. (EX1003, ¶64.)

D. Independent Claims 1 and 22

Claim 1 is representative of the challenged claims, and it recites:

[1.Pre] A slicing apparatus for food products, the slicing apparatus comprising:

[1.A] a removable conveyor belt unit (13) having at least one track and a base (25);

[1.B] a substructure (41) having a mount (11) coupled to the base (25); and

[1.C1] a drive (15) coupled to the conveyor belt unit (13) by a drive belt (27),

[1.C2] the conveyor belt unit (13) is configured to be cancelled by relaxing the drive belt (27) and is configured to be established by tautening the drive belt (27), with the relaxing and tautening of the drive belt (27) each being provided by a relative movement between the drive (15) and the conveyor belt unit (13).

Claim 22 shares a similar claim scope with claim 1. (EX1003, ¶66.) The claim 22 preamble is identical to the claim 1 preamble. Claim 22[A] is nearly identical to claim 1[A] with the addition of “at least one” to the removable conveyor belt unit. Claim 22[B] is identical to Claim 1[B]. Claims 1[C1] and 22[C1] both claim a “drive (15) coupled to the conveyor belt unit (13).” Claim 22[C1] also adds the requirement that the first drive is “at the left side...” and “a second drive (15) at the right side...”

when viewed in the conveying direction. Claim 22[C3] adds the coupling between the drives (15) and the conveyor belt unit (13) is configured to be simultaneously cancelled and established for at least one of the first drive (15) and the second drive (15).

Thus, the evidence cited herein for claim 1 applies to the corresponding elements of claim 22 with the additions addressed below.

E. The Prosecution History

The '487 Patent purportedly claims priority from a German patent application filed December 3, 2012. (EX1002, 549.) The Examiner issued two office actions during the prosecution of the '487 Patent. (*Id.*, 42, 134.) The prosecution history repeatedly reflected that the claimed conveyor system was not limited to slicing or food product applications. (*Id.*, 48, 138.)

F. Priority Date

The earliest possible priority date that the '487 Patent can claim the benefit of is December 3, 2012. (EX1001, Code 30.)

III. LEVEL OF ORDINARY SKILL IN THE ART

For the purposes of this proceeding, Petitioner applies the Board's prior finding of the level of ordinary skill in the art (from a case between Provisur and Weber, a company related to Patent Owner Textor) including a POSA that would typically have had (1) a bachelor's degree (or equivalent) in mechanical engineering

(or a similar field) and at least two years of experience working as an engineer (or similar role) on food processing and/or packaging systems (or in a similar field); or (2) at least seven years of experience working as an engineer (or similar role) on food processing and/or packaging systems (or in a similar field). *See Weber, Inc. v. Provisur Techs., Inc.*, No. IPR2022-00599, Paper 65, *10-11 (P.T.A.B. Aug. 23, 2023).

Further, the Board previously recognized a POSA would have had knowledge of technical literature concerning food processing and packaging systems, including conveyor mechanisms (in both food processing and packaging machines, and other conveying machines), and may have worked as part of a multidisciplinary team drawing on her or his skills, and also of others on the team. *See id.* A POSA may have consulted with subject matter experts, such as in the fields of hygiene.

IV. CLAIM CONSTRUCTION

Provisur has construed the claim terms under *Phillips* according to their plain and ordinary meanings as understood by a POSA in view of the specification and prosecution history. No terms require an explicit construction to resolve the unpatentability controversy between the parties here. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Indeed, Patent Owner has recently explained: “I think that most of our patent claims are plain and ordinary. They’re not difficult or complex claims or claim terms. I don’t envision burdening the court with much Markman at all.” (EX1020, *Provisur v. Weber III*, Sept. 5, 2023 Hearing Tr., 5.)

Preamble Not Limiting: Consistent with the above view, Petitioner states that the “slicing apparatus for food products” preamble is not limiting, as is the ordinary presumption. Further, Petitioner explains below why the preamble is not a limitation in case Patent Owner raises this issue.

Patent Owner “define[d] a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.” *Shoes by Firebug LLC v. Stride Rite Children's Group, LLC*, 962 F.3d 1362, 1367–68 (Fed. Cir. 2020) (quoting *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002)). The preambles in the ’487 patent are not “necessary to give life, meaning, and vitality to the claim.” *Id.* (internal quotations omitted). The preamble here is simply to suggest the conveyor can be used in a slicer.

The intrinsic evidence supports this view: the specification states the invention may be components of generic “conveying devices” or “of slicing apparatus for food products.” (EX1001, 6:56-59, 7:23-26.) None of the figures

show a slicing apparatus or food products. Nor do the independent claim rely on the preamble for antecedent basis.²

Additionally, during prosecution the Examiner emphasized that “[t]he recitations to ‘slicing’ or ‘for food products’ are considered to be recitations of the intended use of the apparatus and are not considered to limit the structure of the apparatus. See MPEP 2114.” (EX1002, 138.) In the subsequent Office Action Response, Patent Owner did not contest the Examiner’s position that “slicing” and “for food products” do not limit the structure of the apparatus. (*Id.*, 62.)

Therefore, the ’487 patent preamble is not limiting.³

V. IDENTIFICATION OF CITED PRIOR ART

A. Konishi (EX1004)

JPH06117905 (“Konishi”) is the base reference for Grounds 1 and 2. Konishi was filed on August 8, 1986, titled “Belt conveyor-type weighing device.” (EX1004, code (22).) Konishi published on April 28, 1994. (*Id.*, code (43).)

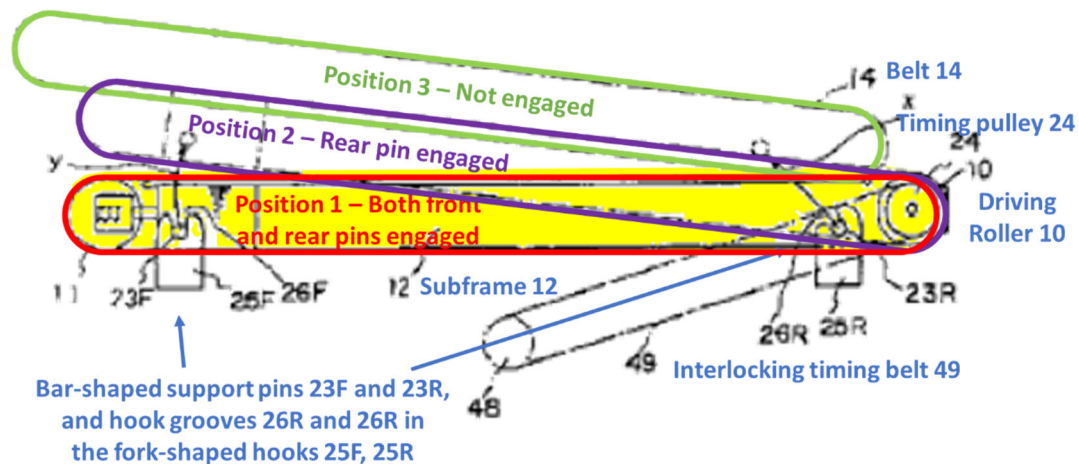
² Likewise, the preamble is redundant of the dependent claims 2 and 3 reference to the “slicing apparatus,” and the preamble adds nothing to these claims.

³ In the district court, Patent Owner has not proposed that the preamble is limiting in any way.

Konishi describes a removable belt conveyor for food processing and touts its improved cleaning, maintenance, and the removability. (EX1004, [0007].) Konishi's removable conveyor belt is part of a weighing device in a confectionery line. (*Id.*, [0004].) Konishi describes the removal process for the conveyor belt, and explains that relative movement loosens or tightens the drive belt. (*Id.*, [0033]-[0036].)

The below figure annotated by Petitioner's expert illustrates, based on Figure 8 of Konishi, the removal of Konishi's conveyor belt assembly from position 1 to position 2 to position 3, in which the conveyor belt unit is pivoted and slid out of place.

Figure 8



(EX1003, ¶45 (Petitioner's Expert's Annotations).)

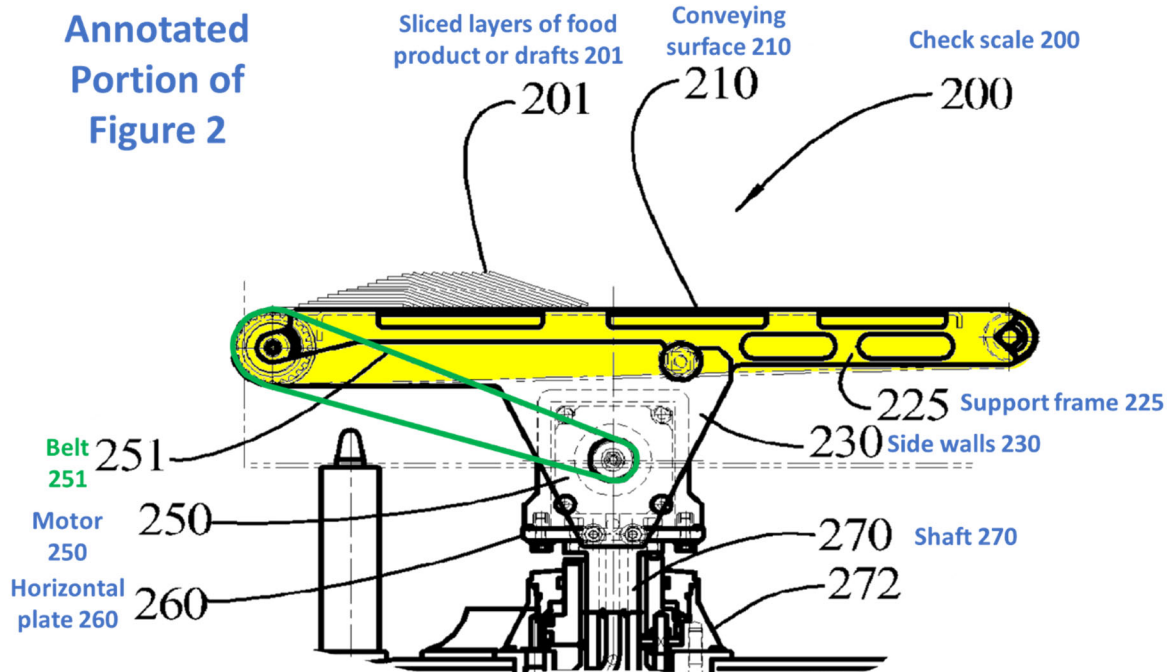
Konishi was not cited or disclosed during prosecution.

Lindee was not cited or disclosed during prosecution.

C. McLaughlin (EX1006)

U.S. Patent No. 9,296,120 (“McLaughlin”) is the base reference for Grounds 3 and 4. It is another of Petitioner’s patents. (EX1006; EX1019, 9; *see also* EX1030, 142-143; EX1031, 149-150.) McLaughlin claims priority from an October 26, 2009 provisional application, and its PCT application was filed on October 26, 2010. (EX1006.)

McLaughlin discloses a slicing machine, a slice scale, and a check scale that includes a removable conveyor assembly. (EX1006, 3:34-65, FIG2.) The below figure annotated by Petitioner’s expert illustrates the removal of McLaughlin’s conveyor belt assembly. For removal, the check scale 200 is pivoted around the left-most point where it attaches to side walls 230 and then is slid to the right.



(EX1003, ¶54 (annotations added).)

McLaughlin was not cited or disclosed during prosecution.

D. Other Evidence of the State of the Art (EXS1007-1018, 1021-1031, 1033)

The prior art summarized in Sections II.A-B further reflects the state of the art, level of ordinary skill, common knowledge, and/or common sense around the time of alleged invention, and is therefore also relevant to the background of the invention and the unpatentability analysis herein. (EX1003, ¶¶36-39.)

VI. IDENTIFICATION OF CHALLENGE (37 C.F.R. § 42.104(B))

Petitioner requests *Inter Partes* Review of claims 1-4, 6, 9-10, 14-16, and 22 of the '487 patent and request that the Board find these claims to be unpatentable based on the following specific statutory grounds and prior art.

A. Prior Art

Konishi and Lindee are prior art under at least pre-AIA §102(b) because they were published more than one year before the '487 patent's earliest possible priority date, December 3, 2012.⁴ McLaughlin is prior art under at least pre-AIA §102(e) because McLaughlin is a U.S. Patent that claimed the benefit of an international application filed after November 29, 2000, designating the U.S. and published under PCT Article 21(2) in English.

- Konishi, published April 28, 1994 (EX1004)
- Lindee, published August 14, 2003 (EX1005)
- McLaughlin, PCT filed Oct. 26, 2010 (EX1006)

⁴ For the sake of argument, Petitioner applies the earliest possible priority date identified by Patent Owner in related proceedings. This should not be interpreted as Petitioner agreeing with that priority date.

B. Grounds

Ground 1: JPH06117905 to Konishi (EX1004) anticipates claims 1, 6, 9, 15-16 under 35 U.S.C. §102.

Ground 2: JPH06117905 to Konishi (EX1004) in combination with WO03/065786 to Lindee (EX1005) renders obvious claims 1-4, 6, 9-10, 14-16, 22 under 35 U.S.C. §103(a).

Ground 3: U.S. Patent No. 9,296,120 to McLaughlin (EX1006) renders obvious claims 1-4, 6, 9-10, 14-16, 22 under §103(a).

Ground 4: U.S. Patent No. 9,296,120 to McLaughlin (EX1006) in combination with Konishi renders obvious claims 1-4, 6, 9-10, 14-16, 22 under §103(a).

The below chart summarized Petitioner's grounds.

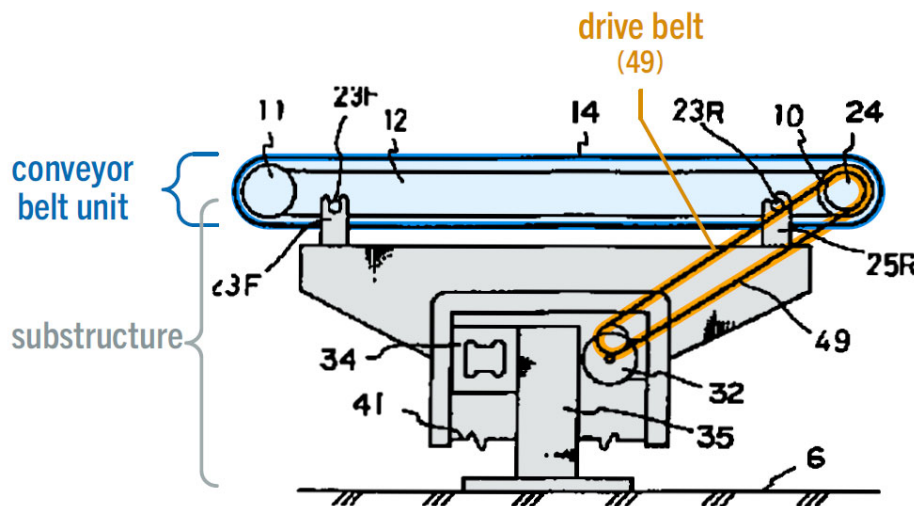
Ground	Claims Challenged	35 U.S.C. §	References
1	1, 6, 9, 15-16	102	Konishi
2	1-4, 6, 9-10, 14-16, 22	103(a)	Konishi, Lindee
3	1-4, 6, 9-10, 14-16, 22	103(a)	McLaughlin

4	1-4, 6, 9-10, 14-16, 22	103(a)	McLaughlin, Konishi
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Grounds 1-4 are substantially different than the art and arguments previously considered by the Patent Office. During prosecution, the examiner did not cite or apply Konishi, Lindee, or McLaughlin. Thus, the same or substantially the same prior art or arguments were not previously presented to the Patent Office.

VII. GROUND 1: KONISHI ANTICIPATES CLAIMS 1, 6, 9, 15, 16.

Konishi anticipates and discloses all of the elements of claims 1, 6, 9, 15-16, including [A] the removable conveyor belt unit, track, and base, [B] substructure and mount, [C1] drive and drive belt, and [C2] relaxing and tautening the drive belt, as reflected below in the annotated Figure 9 from Konishi. (EX1003 ¶¶70-71.)



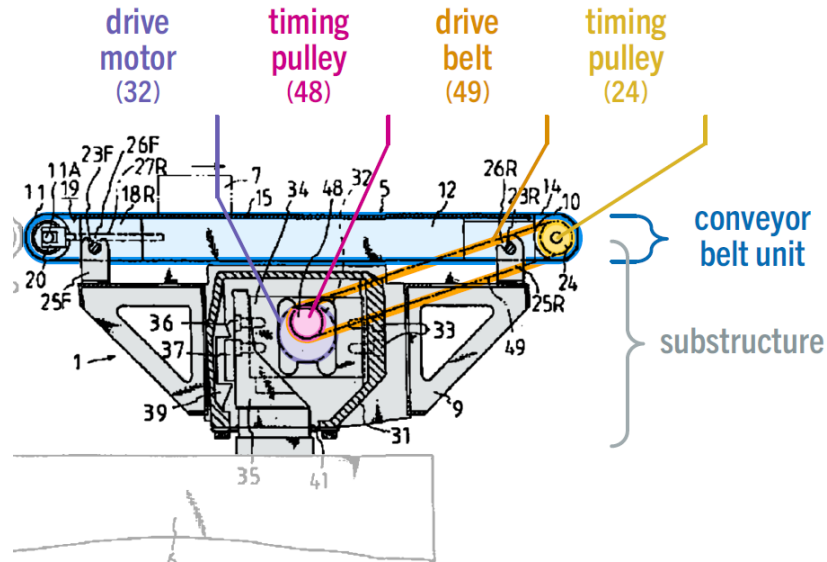
Claim Element	Konishi Exemplary Disclosures
removable conveyor belt unit	conveyor belt 14, subframe 12, and rollers 10-11, timing pulley 24
Base	subframe 12
substructure	frame 9
mount	hooks 25R, 25F
Drive	drive motor 32
drive belt	timing belt 49, timing pulley 48, conveyor belt 14, timing pulley 24
relaxing/tautening/relative movement	[0033]–[0041]; Figs. 8-9

A. Independent Claim 1

1. Element 1[A]

Konishi discloses “a removable conveyor belt unit (13) having at least one track and a base (25).” (EX1003, ¶¶72-73.)

The Konishi “removable conveyor belt unit” includes conveyor belt 14, subframe 12, support pins 23F and 23R, and rollers 10-11. Konishi states it is removably attached: “A subframe 12 having a conveyor belt 14 for conveying objects to be weighed is *removably attached* to the frame 9.” (EX1004, [Summary], [0034].) The subframe is pivoted about 23R and subsequently slid out of frame 9. (EX1003, ¶73.)



Furthermore, as in the claim, there is at least one track in Konishi for “conveying objects to be weighed” such as product 7, which can be a lane of food items. (EX1004, [0032], [0004]; EX1003, ¶¶74-75.) At least one track of products is shown in Figures 1 and 10. (*Id.*, FIG1, FIG10.)

The Konishi base includes subframe 12: “The sub-frame 12 in this belt conveyor-type automatic weighing device 5 has a top plate 15, and the conveyor belt 14 is stretched across a drive roller 10 and a driven roller 11 pivotally supported at both front and rear ends of the subframe 12.” (EX1004, [0018]; EX1003, ¶76.) The base also includes “a pair of parallel bar-shaped support [p]ins 23F and 23R.” (EX1004, [0020].)

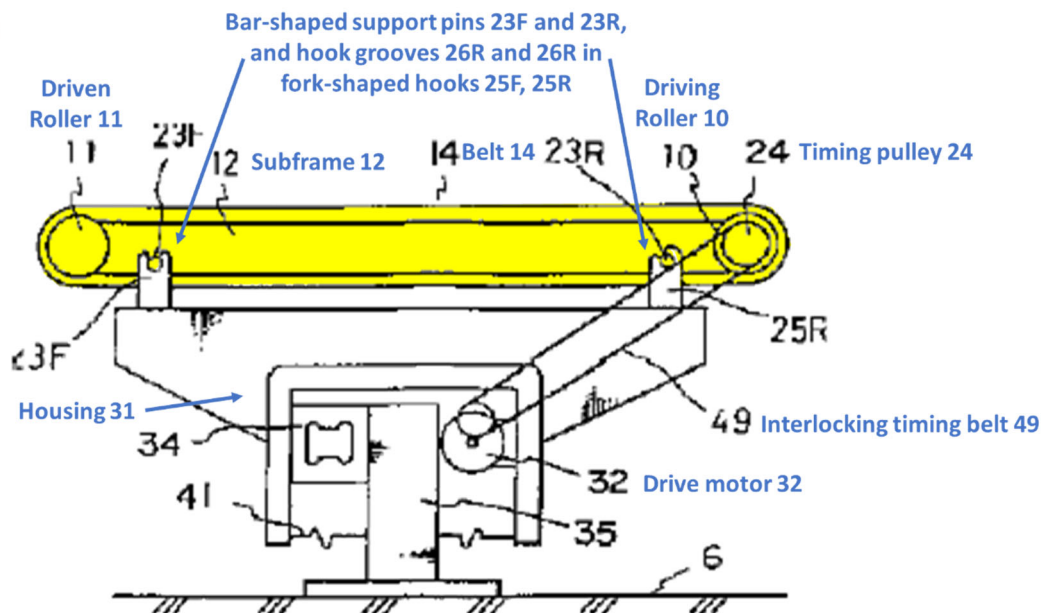
Thus, Konishi teaches claim element 1[A]. (EX1003, ¶77.)

2. Element 1[B]

Konishi discloses “a substructure (41) having a mount (11) coupled to the base (25).” (EX1003, ¶¶78-79.)

As seen below, the Konishi substructure includes frame 9, which is the structure beneath subframe 12 pins 23F and 23R. (EX1003, ¶¶79-80.) The frame 9 includes a mount in the form of a pair of hooks 25F, 25R. The mount is coupled to the base subframe 12.

Figure 9



EX1003, ¶81.)

Konishi describes the substructure frame and mount hooks that are coupled to the subframe 12:

[O]n the top surface of frame 9 in belt conveyor-type automatic weighing device 5, a pair of fork-shaped hooks

25F, 25R are protruded upward at the front and rear in correspondence with the pair of support bins 23F, 23R on the subframe 12 side and the front hook 25F has a hook groove 26F that opens upward, and the rear hook 25R has a hook groove 26R that opens diagonally upward, and by engaging and disengaging the support bins 23F, 23R on the subframe 12 side with these hook grooves 26F, 26R, the subframe 12 can be attached to and removed from the frame 9, and in the attached state, the hooks 25F and 25R support the entire weight of the subframe 12.

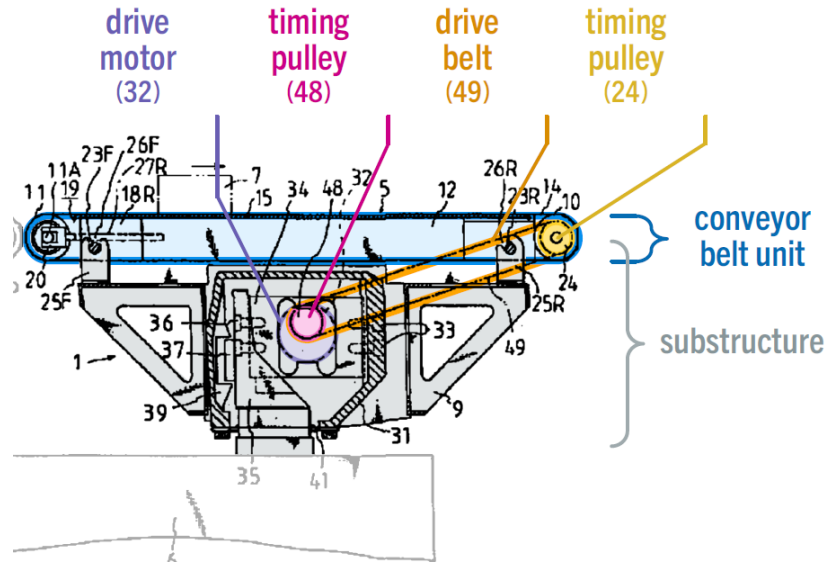
(EX1004, [0021].)

Thus, Konishi teaches claim element 1[B].

3. Element 1[C1]

Konishi discloses “a drive (15) coupled to the conveyor belt unit (13) by a drive belt (27).” (EX1003, ¶¶83-84.)

The Konishi drive includes “drive motor 32.” (EX1004, [0025].) Drive motor 32 is connected to timing belt 49 and timing pulley 48, which are connected to conveyor belt 14 and timing pulley 24. (EX1004, [0026].)



(EX1003, ¶85.)

Thus, Konishi teaches claim element 1[C1]. (EX1003, ¶¶85-86.)

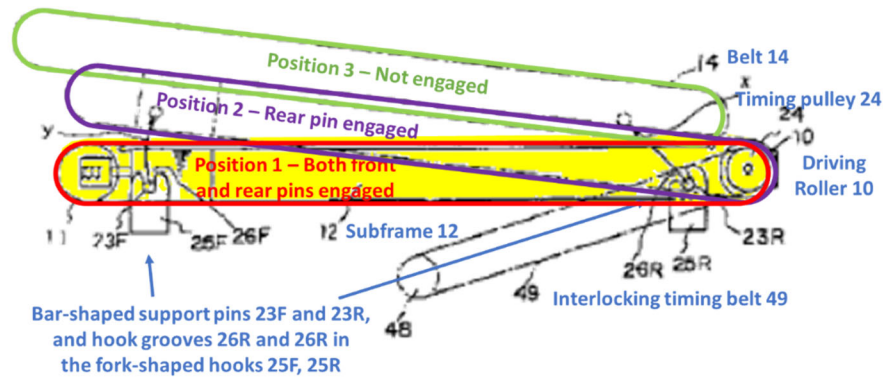
4. Element 1[C2]

Konishi discloses “the conveyor belt unit (13) is configured to be cancelled by relaxing the drive belt (27) and is configured to be established by tautening the drive belt (2), with the relaxing and tautening of the drive belt (27) each being provided by a relative movement between the drive (15) and the conveyor belt unit (13).” (EX1003, ¶¶87-88.)

Konishi describes the claimed “configured to be cancelled by relaxing the drive belt” operation as the belt becoming “loose” so it can be “easily removed.” (EX1004, [0033-34].) “[S]ince the timing prefix 24 fixed to the shaft 10A of the drive roller 10 moves diagonally downward, the interlocking timing belt

49...becomes loose, and the timing belt 49 can be easily removed from the timing pulley 24 of the drive roller 10.” (*Id.*)

Figure 8



(EX1003, ¶89.)

As shown above, annotated Konishi Figure 8 illustrates the relative movement between the conveyor belt unit and drive. (EX1003, ¶90.) The conveyor belt unit is in a horizontal position in Figure 8; then, it is “lightly lifted upward in the direction of arrow y, as shown by the dashed line in Figure 8.” (EX1004, [0033]) After being “lifted upward,” multiple discrete points of the conveyor belt unit are closer or farther away from drive motor 32 than when in the horizontal position. (*Id.*; EX1003, ¶¶91-92.) Konishi Figure 8 is very similar to the Figure 14 embodiment of the ’487 patent illustrating the claimed relative movement.

Thus, Konishi teaches claim element 1[C2].

5. Preamble

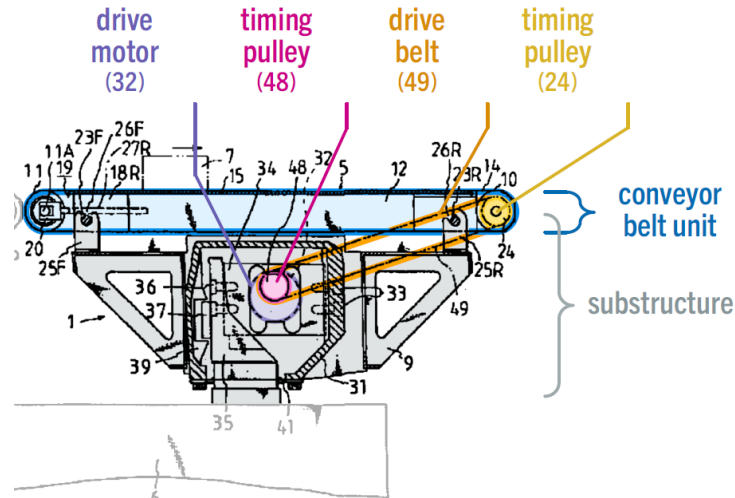
Konishi refers to food items such as confectionaries. (EX1004, [0001], [0004].) However, Konishi does not expressly disclose the preamble “slicing apparatus for food products.” But, as discussed above, the preamble is not a limitation on the scope of the claims here, therefore, the preamble does not need to be met to show anticipation.⁵ (EX1003, ¶¶94-96.)

B. Dependent Claim 6

Konishi discloses “wherein at least one drive motor (15) for the conveyor belt unit (13) is provided, with the drive motor (15) being directly coupled with the conveyor belt unit (13), and/or unit; and wherein the drive motor (15) is arranged beneath the conveyor belt unit (13).” (EX1003, ¶¶97-98.)

Konishi discloses that a “drive motor and the drive roller of the conveyor belt are interlocked via an interlocking belt.” (EX1004, [0008].) Konishi describes that the “drive roller” is part of the conveyor belt unit that is “removably attached to a frame equipped with a drive motor.” (*Id.*) Konishi’s “interlocking belt” directly couples the “drive motor and the drive roller of the conveyor belt.” (EX1004, FIG1; EX1003, ¶¶99-100.)

⁵ In the alternative, as described in Ground 2, the “slicing apparatus for food products,” and the claim as a whole, would have been obvious.



(EX1003, ¶101 (annotations added).)

Figure 1 of Konishi shows that motor 32 is arranged beneath the conveyor belt unit. (EX1004, FIG1, FIG4, FIG9, FIG11; EX1003, ¶101.)

Thus, Konishi discloses claim 6.

C. Dependent Claim 9

Konishi discloses “wherein a respective relative movement is provided between the drive motor (15) and the conveyor belt unit (13) for cancelling and establishing a coupling between a drive motor (15) for the conveyor belt unit (13) and the conveyor belt unit; and.” (EX1003, ¶¶103-106.) The same evidence addressed in for element 1[C1] (*see* Section VII.A.3) applies to this claim.

Konishi discloses claim element 1[C]2: “the conveyor belt unit (13) is configured to be cancelled by relaxing the drive belt (27) and is configured to be established by tautening the drive belt (2), with the relaxing and tautening of the

drive belt (27) each being provided by a relative movement between the drive (15) and the conveyor belt unit (13).” The same evidence addressed in for element 1[C2] (*see* Section VII.A.4) applies to this claim.

Further, Konishi discloses “wherein the spacing between a drive axle of the drive motor (15) and a drive axle of the conveyor belt unit (13) is configured to be varied by the relative movement.” (EX1003, ¶107.) For instance, Konishi’s “shaft 10A” corresponds to the conveyor belt unit’s drive axle, while Konishi’s rotary shaft 62 corresponds to the drive motor’s drive axle. (EX1003, ¶107; EX1004, [0033-34].) Konishi describes a relative movement that varies the spacing between the drive axles when the timing prefix moves downward. (*Id.*) This relative movement is also shown in Figure 8.

Thus, Konishi discloses claim 9. (EX1003, ¶108.)

D. Dependent Claim 15

Konishi discloses “at least one continuous belt or continuous band (55) or a plurality of parallel continuous straps (57) is/are provided as conveying means of the conveyor belt unit.” (EX1003, ¶¶109-111.)

Konishi discloses “at least one continuous belt...provided as conveying means of the conveyor belt unit.” (EX1003, ¶112.) Konishi discloses that its apparatus is “configured so that...the product 7 is placed on the conveyor belts 13

and 14 and conveyed continuously.” (EX1004, [0002].) Konishi’s figures also illustrate that conveyor belts 13 and 14 are continuous belts because they are endless belts that wrap around two rollers. (EX1003, ¶¶112-113; *see also* EX1004, FIG1, FIG6, FIG9, FIG10.)

Thus, Konishi discloses claim 15.

E. Dependent Claim 16

Konishi discloses “the conveyor belt unit (13) is configured to be removed and/or installed without tools.” (EX1003, ¶¶114-115.)

First and foremost, Konishi describes a tool-less removal process with simple movements. (EX1003, ¶¶115-116.) Konishi describes that “[f]irst...the front part of the subframe 12 is lightly lifted upward...and the front support pin 23F is removed.” (EX1004, [0033].) Konishi then explains that the timing belt is relaxed by the first movement, and that “the timing belt 49 can be easily removed from the timing pulley 24 of the drive roller 10.” (*Id.* [0034].) Finally, “the rear part of the subframe 12 is pulled diagonally upward” to complete the separation. (*Id.*, [0034].)

Konishi describes that installation is completed by “performing the operation opposite” as to the removal described above. (EX1004, [0022] [0039].) Thus, Konishi also describes an entirely tool-less installation of the conveyor belt assembly.

Second, the purpose of the alleged invention is “[t]o simplify the structure of the subframe containing the conveyor belt to make it easier to remove from the frame.” (EX1004, [Purpose]; *see also* [0047].) A POSA would recognize that tool-less removal makes the substructure simpler while making conveyor belt unit removal easier. (EX1003, ¶¶115-116.)

Further, the patent prosecution history reflects that Konishi, or any other prior art reference, would anticipate or render obvious Dependent Claim 16 by disclosing one of a tool-less installation or a tool-less removal. (EX1002, 73.)

Thus, Konishi discloses claim 16.

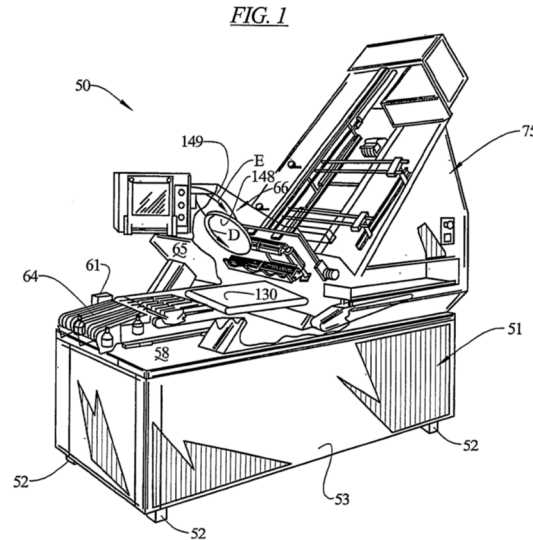
VIII. GROUND 2: KONISHI IN COMBINATION WITH LINDEE RENDERS OBVIOUS CLAIMS 1-4, 6, 9, 10, 14-16, 22.

A. Independent Claim 1

As shown in Section VII.A, Konishi includes the apparatus of claim 1. In the event Weber argues or the Board finds that the preamble is limiting (which it is not), the claims are unpatentable as obvious in view of Konishi and Lindee. Lindee clearly discloses a “slicing apparatus for food products,” and it would have been obvious to combine Konishi and Lindee as claimed. (EX1003, ¶¶118-121.)

First, Lindee is titled “Conveyor system for *slicer apparatus*.” Lindee’s first sentence states “[t]he present invention relates to slicing apparatus and associated

conveyor systems.” (EX1005, 1.) Figure 1 shows a “versatile high-speed food loaf slicing machine 50.” (EX1005, 4.) These disclosures could not be clearer.



Second, a POSA would have been motivated to combine Konishi and Lindee. (EX1003, ¶122.) Konishi provides several explicit reasons to use its removable conveyor in a food slicing application. Konishi’s stated reasons to combine include improved maintenance, cleanliness, and efficiency:

The objective is to provide a belt conveyor-type automatic weighing device having a simple structure wherein the subframe side can be easily disassembled and assembled from the frame, and maintenance such as cleaning of each mechanical part can be performed reliably and efficiently, and the waterproof performance of the weight detector and motor can be ensured with a simple configuration.

(EX1004, [0007].) Konishi emphasizes the known desire in the food processing art “to be able to easily and efficiently perform various types of maintenance such as

cleaning with water, inspection equipment, and repair on a regular or irregular basis in order to maintain good hygiene conditions.” (EX1004, [0004].) A purpose of Konishi’s removable conveyor is to “maintain hygienic management” during required disassembly without taking too much time. (EX1004, [0032].) Given these teachings, a POSA would have been motivated to apply Konishi’s removable conveyor to improve other food processing applications with conveyors in the same way, including slicers such as in Lindee. (EX1003, ¶¶123-126, ¶128.)

In addition, Lindee’s teachings would have led a POSA to seek to improve conveyor cleaning and sanitation procedures, such as with Konishi. (EX1003, ¶127.) Lindee recognizes the known benefits of removable conveyors for “cleaning and sanitizing.” (EX1005, 10.) This teaching would have led a POSA to consider other more effective removable conveyor options in the food processing art, such as taught by Konishi. A POSA would have found it obvious to improve upon the Lindee removable conveyor in light of the Konishi teachings. (EX1003, ¶¶130-133.)

Third, a POSA would have had a reasonable expectation of success in combining Konishi and Lindee as claimed. (EX1003, ¶135.) A removable conveyor was a common, well-known arrangement for improving cleanliness and maintenance that engineers used in many industries, including food processing and slicing. (EX1003, ¶39, ¶136.) The record has multiple examples of removable conveyors.

(EX1003, ¶39; *see also* EX1004; EX1016, Abstract; EX1007 Abstract, [0008].) A POSA would have known how to apply conveyor technology in a food slicing machine, such as Lindee, using routine components and techniques, such as shafts, gears, pulleys, belts, and rudimentary programming. (EX1003, ¶135.) This is especially true in light of Konishi's express teaching for how to implement a removable conveyor in a food processing line, and Lindee's express teaching of removable conveyors for slicers. (EX1003, ¶136.)

Though bodily incorporation is not required to show obviousness, a POSA would have appreciated that the claimed combination would have been met by implementing Konishi's removable conveyor in a slicer line (rather than in a confectionary line). (EX1003, ¶137.) This simple modification would require nothing more than installing Konishi's conveyor belt in a food slicer or food slicing line.

* * *

In sum, a POSA would have had a reason to combine Konishi's and Lindee's teachings to arrive at the claimed invention with a reasonable expectation of success. Accordingly, claim 1 would have been obvious.

B. Dependent Claims 2 and 3

Claims 2 and 3 depend from claim 1 and further respectively recite “wherein the conveyor belt unit (13) is arranged in front of a cutting plane of the slicing apparatus, viewed in the conveying direction,” and “wherein the conveyor belt unit (13) is arranged behind a cutting plane of the slicing apparatus, viewed in the conveying direction.”

Konishi in combination with Lindee renders obvious claims 2 and 3. (EX1003, ¶139.) Lindee discloses conveyors that are both in front of and behind the cutting plane of a slicing apparatus when viewed in the conveying direction. (EX1005, FIG1.) A POSA would have found it obvious to implement the idea of Konishi’s removable conveyor in front of or behind the cutting plane for the same reasons discussed above in Section VIII.A, and this combination would be a simple substitution of known components that requires no change in the functionality of Konishi and yields a predictable result. (EX1003, ¶140.) In either location, it is a simple rearrangement of parts. *See also* M.P.E.P. §2144.04(VI)(C). A POSA would have had a reasonable expectation of success implementing the idea of Konishi’s removable conveyor in front of or behind Lindee’s cutting plane using routine engineering methods. (EX1003, ¶137, ¶140.)

Thus, claims 2 and 3 would have been obvious in light of Konishi and Lindee.

C. Dependent Claims 4 and 14

Claims 4 and 14 depend from claim 1 and further respectively recite “the conveyor belt unit (13) has, viewed in the conveying direction, a belt length or conveyor length which amounts to less than 500 mm,” and “the conveyor belt unit (13) has a conveying width in the range from approximately 300 mm to 700 mm.”

Konishi in combination with Lindee renders obvious claims 4 and 14. (EX1003, ¶¶142-143.) Lindee explicitly discloses a conveyor that meets claim 4’s length requirement, and approximately meets claim 14’s width requirements. (EX1005, 7 (“[T]he conveying surface has a working area...of about 9 inches (229 mm) by 9 inches (229 mm).”).)

A POSA would have been motivated to implement the claimed ranges of dimensions for the claimed combination for at least three different reasons. First, limiting the removable conveyor assembly to these dimensions makes the conveyor assembly a practical size. (EX1003, ¶¶143-144.) A POSA would not want to make a removable conveyor assembly too large because the conveyor assembly would be difficult to remove and relocate during maintenance and cleaning. (*Id.*) Further, a POSA would have appreciated benefits in food processing applications that have a conveyor under 500mm because space on the factory floor is at a premium and there

are efficiencies and advantages of having smaller equipment on the line that save time. (*Id.*, ¶145.)

Second, the simple structural rearrangement of parts, especially if the functionality remains the same, is an obvious matter of design choice. (EX1003, ¶146; *see also* M.P.E.P. §2144.04(VI)(C); *In re Kuhle*, 526 F.2d 553, 555 (C.C.P.A. 1975).) The '487 Patent does not identify any critical, unexpected, or beneficial results caused by the particular size of the conveyors. (EX1003, ¶146, ¶148.)

Third, a POSA would have been aware of prior art that discloses conveyors with the same dimensions claimed and that conveyors could be various sizes depending on the application. (EX1021, 64:64-65:1; EX1022, 5; EX1027, 7-8; EX1028, 6:49-67; EX1029, 25:57-26:7; EX1003, ¶147.)

Fourth, merely changing the size or proportion of a device does not give rise to a patentable invention. *See Powers-Kennedy Contracting Corp. v. Concrete Mixing & Conveying Co.*, 282 U.S. 175, 185 (1930) (“[O]bviously a mere change in proportion would involve no more than mechanical skill and would not amount to invention.”); *see also Gardner v. TEC Syst., Inc.*, 725 F.2d 1338 (Fed. Cir. 1984). Changing the dimensions of a removable conveyor is a simple change yielding no unexpected results or functions. (EX1003, ¶148.)

A POSA would be motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A.

Thus, dependent claims 4 and 14 would have been obvious in light of Konishi and Lindee.

D. Dependent Claim 6

Claim 6 depends from claim 1 and further recites “wherein at least one drive motor (15) for the conveyor belt unit (13) is provided, with the drive motor (15) being directly coupled with the conveyor belt unit (13), and/or unit; and wherein the drive motor (15) is arranged beneath the conveyor belt unit (13).”

Konishi discloses these features for the reasons discussed in Section VII.B. Further, Konishi in combination with Lindee renders obvious claim 6. (EX1003, ¶¶150-151.) Konishi and Lindee both disclose a drive motor. (EX1004, [0008]; EX1005, 5-6; EX1003, ¶152.) Konishi discloses that “the drive motor and the drive roller of the conveyor belt are interlocked via an interlocking belt.” (EX1004, [0008].) Lindee also discloses that its motor drives conveyor belt unit via a belt drive. (EX1005, 5-6, FIG2; EX1003, ¶152.) Konishi discloses that the “drive roller” is part of the conveyor belt unit “removably attached to a frame equipped with a drive motor.” (*Id.*) Konishi and Lindee’s drive belts directly couple their motors to their conveyor belt units. (EX1004, FIG1; EX1005, 5-6; EX1003, ¶¶151-152.)

Thus, both Konishi's and Lindee disclose a drive motor directly coupled to a conveyor belt unit.

Konishi's Figure 1 shows that motor 32 is arranged beneath the conveyor belt unit. (EX1004, FIG1, FIG4, FIG9, FIG11; EX1003, ¶153.) Lindee incorporates by reference other patents—such as U.S. Patent 5,649,463, U.S. Patent 5,704,265, EP 0713753 and WO 99/08844—that further illustrate the motor arrangement. (EX1005, 1.) A POSA would have knowledge of these additional disclosures. For example, U.S. Patent 5,704,265 (“Johnson”) discloses a high speed slicing machine with conveyor 130 driven by motor 176 via belt 194. (EX1017, Abstract, 13:30-32.) Johnson's Figure 7 illustrates that motor 176 is arranged beneath conveyor belt unit 130, as well as many other similar motor arrangements. (*Id.*, FIG7; EX1003, ¶153.)

A POSA would have been motivated to place the motor underneath the conveyor belt unit because this would have been a space saving arrangement. (EX1003, ¶154.) Space on factory floors in food processing plants is in high demand, and designing compact machines is, thus, an important consideration in the industry. (*Id.*)

The prior art reflects that a POSA would have been aware that motors could be placed on either side of a conveyor, as disclosed in Lindee, or beneath a conveyor,

as disclosed in both Lindee and Konishi. (EX1005, 8, FIG4; EX1004, FIG1, FIG4, FIG9, FIG11; EX1003, ¶154.)

Additionally, the simple structural rearrangement of parts—such as placing a drive motor beneath a conveyor—especially if the functionality remains the same, is an obvious matter of design choice. (EX1003, ¶156; M.P.E.P. §2144.04(VI)(C).)

A POSA would have been motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A. (EX1006, ¶¶156-157.)

Thus, Konishi in combination with Lindee renders obvious claim 6.

E. Dependent Claim 9

Claim 9 depends from claim 1 and further recites “wherein a respective relative movement is provided between the drive motor (15) and the conveyor belt unit (13) for cancelling and establishing a coupling between a drive motor (15) for the conveyor belt unit (13) and the conveyor belt unit; and wherein the spacing between the drive axle of the drive motor (15) and a drive axle of the conveyor belt unit (13) is configured to be varied by the relative movement.”

Konishi in combination with Lindee renders obvious claim 9. (EX1003, ¶¶158-159.) Konishi discloses this feature for all of the reasons in Section VII.C.

A POSA would have been motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A. (EX1003, ¶¶159-160.)

F. Dependent Claim 10

Claim 10 depends from claim 1 and further requires “a mount (11) is provided for the conveyor belt unit (13) which remains at the apparatus with a removed conveyor belt unit (13) and at which the conveyor belt unit (13) is configured to be latched, with the latched connection configured to be cancelled for removing the conveyor belt unit (13) and configured to be established for installing the conveyor belt unit (13).”

The same Konishi disclosure addressed in Section VII.A.2 discloses claim 10’s “a mount (11) is provided for the conveyor belt unit (13) which remains at the apparatus with a removed conveyor belt unit (13).” (EX1003, ¶¶161-162.)

Konishi in combination with Lindee and in light of the knowledge of a POSA renders obvious claim 10. A POSA would have been well aware of other prior art that discloses using latches to attach conveyor belt units to mounts with improved security, reliability, and ease of use. (EX1003, ¶163.) For example, Lee discloses that its removable “conveyor assemblies” can be held in place by “common barrel-bolt latches.” (EX1012, [0047].) Lee teaches that a latch is desirable “to prevent

the conveyor assemblies from being accidentally lifted out of position...[and to] reduce the likelihood that a conveyor assembly” might become disconnected “due to the reactive force created by the friction of a food product.” (*Id.*; *see also* EX1024, Abstract; EX1025, 5:19-39.) A POSA would have been motivated to use a latch as an option, such as disclosed in Lee, for these reasons. (EX1003, ¶163.)

Thus, implementing a latched connection would have been an obvious matter of design choice that would also provide benefits already articulated in the prior art. (EX1003, ¶164; *see also In re Kuhle*, 526 F.2d 553, 555 (C.C.P.A. 1975).) Further, a POSA would have had a reasonable expectation of success because using a latched connection would have been a simple addition of a known element that yields a predictable result. (EX1003, ¶164.)

A POSA would have been motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A.

Thus, Konishi in combination with Lindee renders obvious claim 10.

G. Dependent Claim 15

Claim 15 depends from claim 1 and further recites “wherein at least one continuous belt or continuous band (55) or a plurality of parallel continuous straps (57) is/are provided as conveying means of the conveyor belt unit (13).”

Konishi in combination with Lindee renders obvious claim 15. (EX1003, ¶¶166-167.) Konishi discloses this feature for all of the reasons in Section VII.D.

Lindee discloses “a plurality of parallel continuous straps...provided as conveying means of the conveyor belt unit.” (EX1003, ¶168.) Lindee discloses that its conveyor belt unit “includes front and rear rolls 262, 264 and belts 266 wrapped around the rolls at spaced intervals. The belts provide the conveying surface 216. The rear roll 264 includes rings 267 that ensure spacing of the belts 266.” (EX1005, 7; *see also* EX1005 FIG3.) Lindee’s figures also illustrate that the conveying surface 216 consists of a plurality of parallel continuous straps because the belts 266 are endless belts that wrap around two rollers. (EX1005, FIG3, FIG4, FIG4A, Abstract, 14.) Additionally, Lindee states that “[t]he conveying surface 216 is shown schematically as a wide belt, but could also be a plurality of spaced apart ribbons.” (*Id.*, 6.)

Thus, a POSA would have had a reasonable expectation of success when making this change because it would have been a simple substitution of one known element (Lindee’s plurality of straps) for another (Konishi’s single conveyor belt) to obtain a predictable result (conveying means). (EX1003, ¶169.)

A POSA would have combined Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A.

Thus, Konishi in combination with Lindee renders obvious claim 15.

H. Dependent Claim 16

Claim 16 depends from claim 1 and further recites “the conveyor belt unit (13) is configured to be removed and/or installed without tools.”

Konishi in combination with Lindee renders obvious claim 16. (EX1003, ¶171.) Konishi discloses this feature for all of the reasons in Section VII.E. Additionally, a POSA would have been aware of other prior art that discusses tool-less conveyor removal. (EX1003, ¶172; EX1012, [0020].)

A POSA would have been motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A.

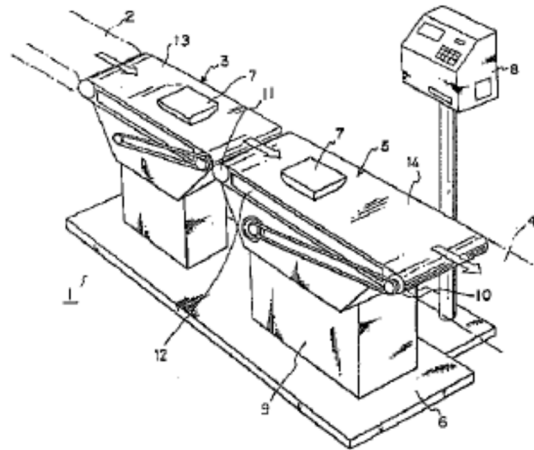
Thus, Konishi in combination with Lindee renders obvious claim 16.

I. Independent Claim 22

As discussed above in Section VII.A, Konishi in combination with Lindee renders obvious the subject matter as a whole of claim 1. The evidence for claim 1 preamble, [A], [B] applies here to render obvious the subject matter of the corresponding elements of the claims 22 preamble, [A], [B]. (EX1003, ¶173, Appendix A). In addition, Konishi in combination with Lindee renders obvious the additional requirements of claim 22[C1], 22[C2], and 22[C3] and the subject matter of the claim as a whole. (*Id.*)

1. Element 22[C1]

Konishi in combination with Lindee renders obvious “a first drive is coupled to the conveyor belt unit at the left side...when viewed in the conveying direction.” (EX1003, ¶¶174-175.) In particular, Konishi discloses a drive 250 coupled to its conveyor belt unit at the right side when viewed in the conveying direction as shown in Figure 10. (EX1004, FIG10.)

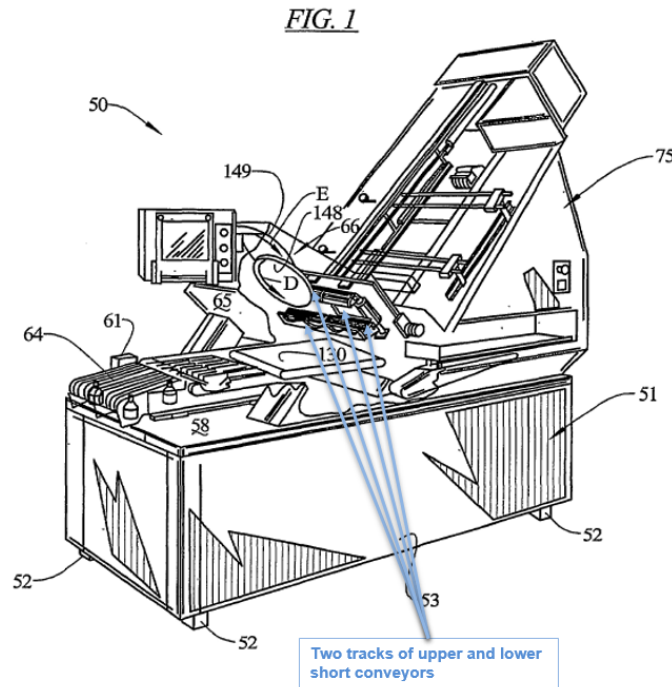


Further, as Lindee shows and was known in the art, whether a drive is coupled to the left side, right side, or any other side was an obvious matter of design choice by the time of invention. (EX1003, ¶175.)

2. Element 22[C2]

Konishi in combination with Lindee renders obvious the conveyor belt unit being coupled “at a second drive (15) at the right side, when viewed in the conveying direction.” (EX1003, ¶176.)

For example, Lindee discloses a slicing machine with two independently driven lanes and drives on the left and right side when viewed in the conveying direction. (EX1005, 12, FIG1; EX1003, ¶177; *see also* EX1017, FIG6; EX1026.)⁶



(EX1003, ¶177.)

Further, as Lindee shows and further described below, a mere duplication of drive components was an obvious matter of design choice by the time of invention. (EX1003, ¶177.) A POSA would have been aware of other prior art that discloses

⁶ Further, as noted above in Section II, multiple references submitted with this Petition teach slicing and/or conveying apparatuses with two or more independently driven lanes.

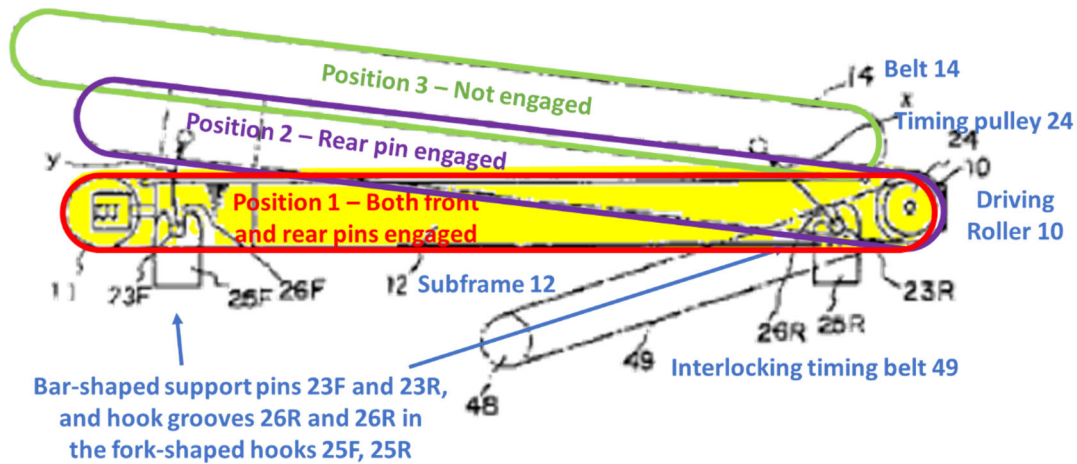
multiple drive food slicers with known advantages such as increased production and throughput, further described below. (EX1003, ¶38; *see also* EX1006, EX1013, EX1014, EX1018.)

3. Element 22[C3]

Konishi in combination with Lindee renders obvious “the coupling between the drives (15) and the conveyor belt unit (13) is configured to be simultaneously cancelled and established for at least one of the first drive and the second drive.” (EX1003, ¶178.)

For example, Konishi describes the claimed “configured to be simultaneously cancelled and establish” operation as Konishi’s drive belt becoming “loose” so the conveyor belt unit can be “easily removed.” (EX1004, [0033-34].) Konishi describes that its installation (the action that would “establish” the coupling) and removal (the action that would “cancel” the coupling) are the same, just performed in reverse order. (EX1004, [0022]; EX1003, ¶179.)

Figure 8



(EX1003, ¶179.)

As shown above, Konishi Figure 8 illustrates a cancelling and establishing of the coupling between the conveyor belt unit and drive. (EX1003, ¶179.) The conveyor belt unit is in a horizontal position in Figure 8, then it is “lightly lifted upward in the direction of arrow y, as shown by the dashed line in Figure 8.” (EX1004, [0033]; EX1003, ¶179.) Konishi Figure 8 is very similar to the Figure 14 embodiment of the ’487 patent.

4. Reason to Combine

It would have been obvious to modify Konishi in view of Lindee to include a second lane with a second drive to increase production and throughput. (EX1003, ¶¶180-181.) It was well known that a second lane with a second drive would increase production by allowing a second food loaf, sliced food product, or object to

be conveyed by the time of this alleged invention around 2012. (EX1003, ¶181.) It was known to increase throughput by essentially doubling the number of conveyed food loaves, sliced food products, or objects. (*Id.*)

Indeed, using two conveyors to feed into or out of a slicing machine was already a well-known arrangement to a POSA by the time of the alleged invention around 2012. (EX1018, 2:14-19; EX1007, Abstract, FIGS 56-58.)⁷ As another example, McLaughlin recognizes “[i]n other embodiments, it is possible to have multiple streams of conveying surfaces such that multiple drafts are processed simultaneously using the present invention.” (EX1006, 5:11-14.) A POSA would have appreciated multiple streams of conveying surfaces would have multiple drives and multiple advantages. (EX1003, ¶¶182-183.) Thus, it would have been obvious to include a second lane with a second drive in Konishi’s conveyor apparatus.⁸

⁷ See *supra* FN6.

⁸ The Board previously determined that a four-lane slicing machine (with a priority date at least five years before the ’487 Patent’s earliest priority date) would have been obvious in view of two-lane prior art. See *Weber v. Provisur*, IPR2022-00599, Paper 65 at 49-60.

In addition, it would have been obvious to combine Konishi and Lindee such that the coupling between a first and second drive and the conveyor belt unit could be simultaneously cancelled/established. This would have only required a mirror image of Konishi's disclosure. (EX1003, ¶182.) A POSA would have been motivated to make the coupling between a first and a second drive configured to be simultaneously cancelled/established to simplify the installation/removal process. (*Id.*) This would have been obvious to a POSA in light of the explicit teachings of Konishi, which, for example, say that the purpose of the device was to "make it easier to remove [the conveyor belt unit] from the frame." (EX1004, [Purpose]; *see also* EX1004, [0007].) A POSA would have been motivated to simplify the installation/removal process so as to reduce the machine down time required for maintenance and/or cleaning. (EX1003, ¶¶182-183.) This would have led a POSA to a configuration with a removable conveyor belt unit that simultaneously cancelled/established both lanes. (*Id.*)

Further, given a two-lane conveyor belt unit, designing that two-lane conveyor belt unit to cancel/establish the two drives simultaneously would have been an obvious, simple structural duplication and rearrangement of parts. (EX1003, ¶182; *see also* M.P.E.P. §2144.04(VI)(B-C); *In re Kuhle*, 526 F.2d 553, 555 (C.C.P.A. 1975).) The '487 Patent does not identify any critical, unexpected, or

beneficial results caused by cancelling or establishing the two drives at the same time. The functionality of the conveyor belt unit (removability and driving two lanes independently) would remain the same.

To design a two-lane conveyor unit such that the two drives simultaneously establish/cancel, a POSA would only need to mirror Konishi's Figure 8 and align the conveyor unit drive pulleys (or gears) in the same axis so that a relative movement of the conveyor belt unit as compared to the drive motor would relax/establish the belts or disengage gears. (EX1003, ¶182.) A POSA would have had a reasonable expectation of success because only a simple mirroring and duplication of parts would have been required. (*Id.*) Further, a POSA would have had a reasonable expectation of success because the prior art includes a number of slicing and conveying machines with two or more lanes. (EX1003, ¶183.) Konishi teaches a relative movement that relaxes/establishes drive belts, and a POSA would have been aware of other prior art that discussed engaging/disengaging gears in conveyors. (EX1004, [0033]-[0040]; *see also* EX1007, [0224]-[0226].)

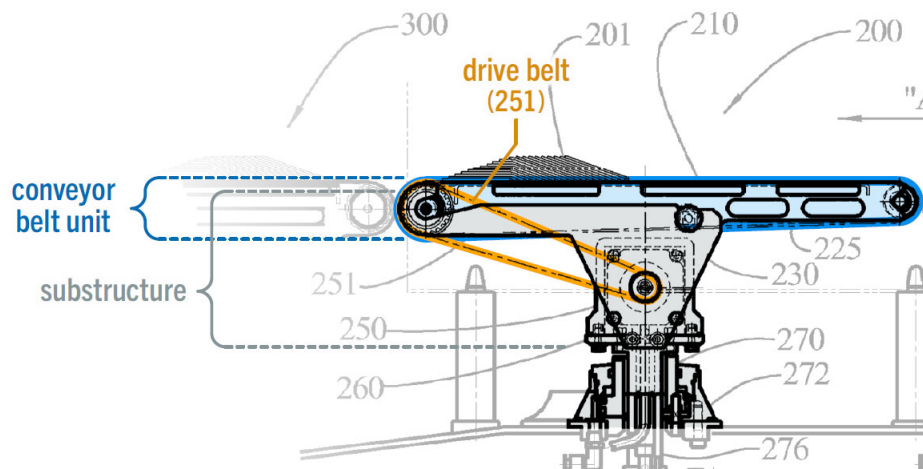
A POSA would have been motivated to combine Konishi and Lindee with a reasonable expectation of success for the reasons discussed above in Section VIII.A.

Thus, Konishi in combination with Lindee would have rendered obvious claim 22.

IX. GROUND 3: MCLAUGHLIN RENDERS OBVIOUS CLAIMS 1-4, 6, 9-10, 14-16, AND 22.

McLaughlin renders obvious claims 1-4, 6, 9-10, 14-16, and 22 in view of the knowledge in the art. McLaughlin teaches all of the structural elements of the independent claim 1. Provided the disclosed mechanics and functions of McLaughlin, the state of the art at the time of the invention, and the wide-spread use of removable conveyors, the claimed use of a removable conveyor would have been obvious. (EX1003, ¶¶184-185.)

More specifically, McLaughlin renders obvious all of the elements of claims 1-4, 6, 9, 10, 14-16, and 22, including [A] the removable conveyor belt unit, track, and base, [B] substructure and mount, [C1] drive and drive belt, and [C2] relaxing and tautening the drive belt, as reflected below in the annotated Figure 2 of McLaughlin. (EX1003, ¶185.)



(EX1003, ¶185.)

Claim	McLaughlin Exemplary Disclosures
removable conveyor belt unit	conveying surface 210 and support frame 225 of check scale 200
base	support frame 225
substructure	sidewalls 230, horizontal plate 260, and motor 250
mount	first and second attachment points
drive	motor 250
drive belt	belt 251
relaxing/tautening/relative movement	FIG2

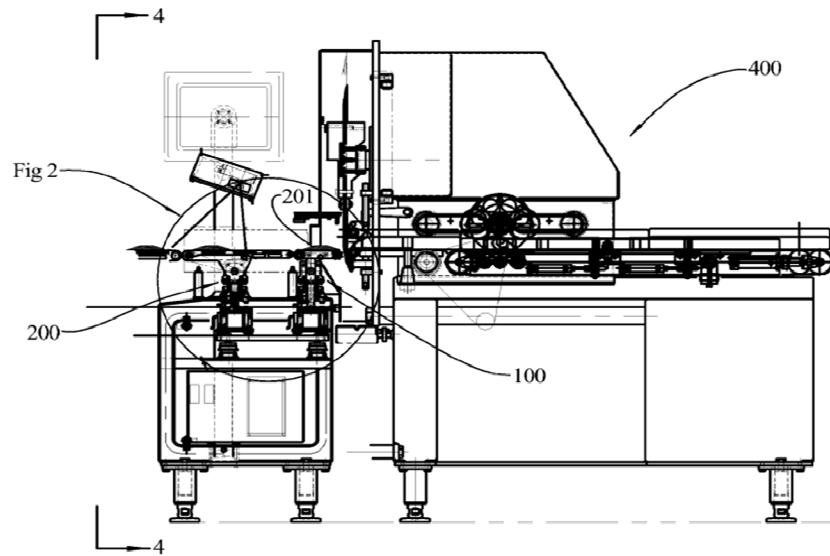
A. Independent Claim 1

1. Preamble

Although not required, McLaughlin discloses the preamble: “[a] slicing apparatus for food products.” (EX1003, ¶¶186-187.)

McLaughlin describes “slicing systems” that create “sliced food products.” (EX1006, 1:15-16.) A scale “is situated under the discharge end of a slicing machine 400 [to receive] sliced layers of food product.” (*Id.*, 3:20-23.)

FIG. 1

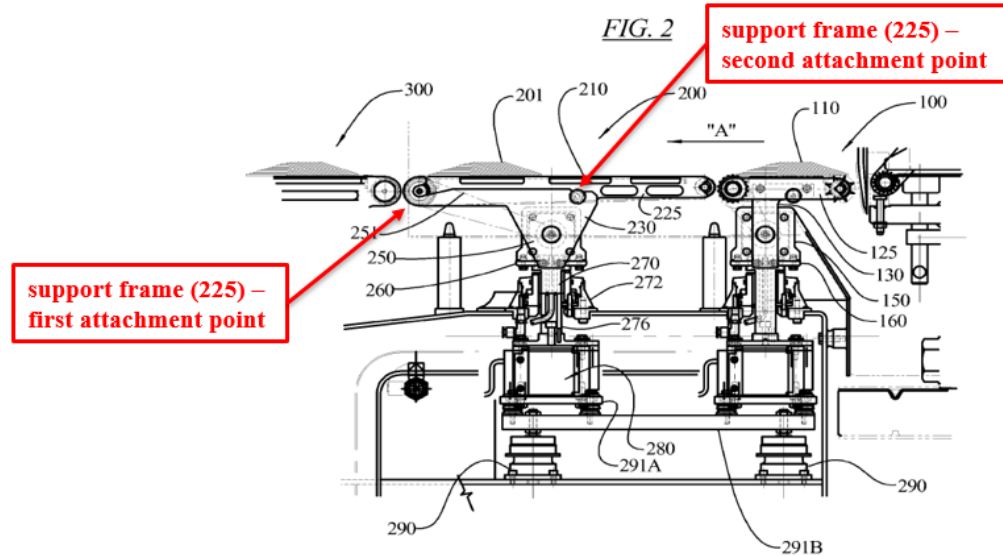


(EX1004, Fig. 1.)

2. Element 1[A]

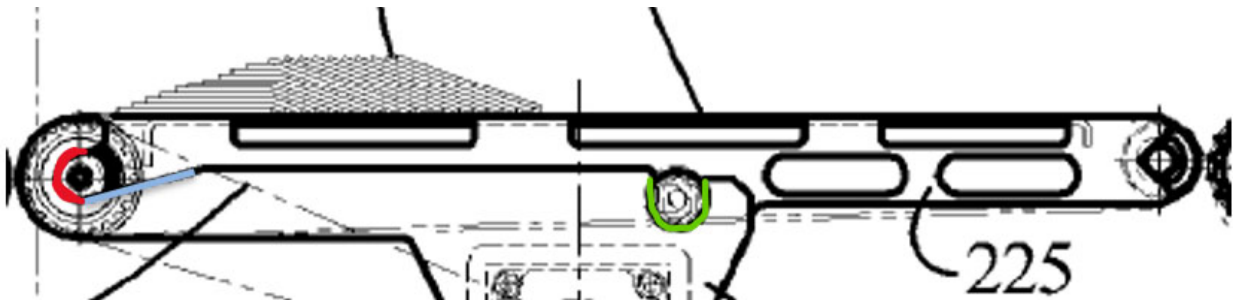
McLaughlin discloses “a removable conveyor belt unit (13) having at least one track and a base (25).” (EX1003, ¶¶188.)

The McLaughlin “removable conveyor belt unit” includes conveying surface 210 and support frame 225 of the check scale 200, such as shown in Figure 2. McLaughlin’s conveying surface 210 is the surface “on which product 201 is conveyed” and “is supported by a support frame 225 which is attached to the side walls 230 on either side of the support frame.” (*Id.*, 3:40-46; EX1003, ¶189.) Figure 2 illustrates this attachment.



(EX1003, ¶189.)

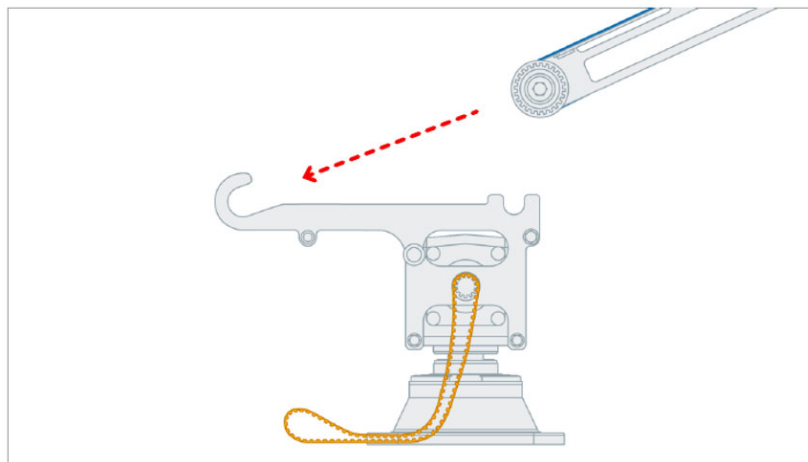
McLaughlin's Figure 2 shows the removable conveyor belt unit. The figure would have made it obvious to a POSA that check scale 200, including its support frame 225 and conveying surface 200, were removable from sidewalls 230. The shape of the sidewalls at attachment point one shows that frame 225 would rest on sidewall 225 and be slid into place. (EX1003, ¶190.) The shape of sidewall attachment point two shows that frame 225 would have been rotated downward (after the first attachment point was established) to establish the second attachment point. (*Id.*) The below zoomed in and annotated version of Figure 2 highlights three elements that would have made this obvious to a POSA: (1) in blue, the surface that frame 225 would slide on to be established at attachment point one, (2) in red, the C shape of attachment point 1, and (3) in green, the C shape of attachment point two.

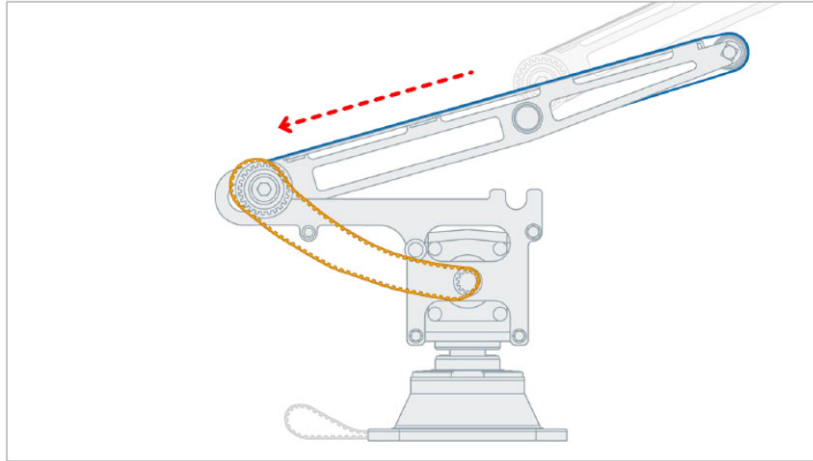


(EX1003, ¶190.)

McLaughlin teaches at least one track of food portions 201. (EX1006, FIGS1-2.; EX1003, ¶189.)

Further, McLaughlin's frame 225 acts as a base for the conveyor belt unit. (EX1003, ¶189.) Petitioner's expert below provides example images illustrating the installation/removal described above.



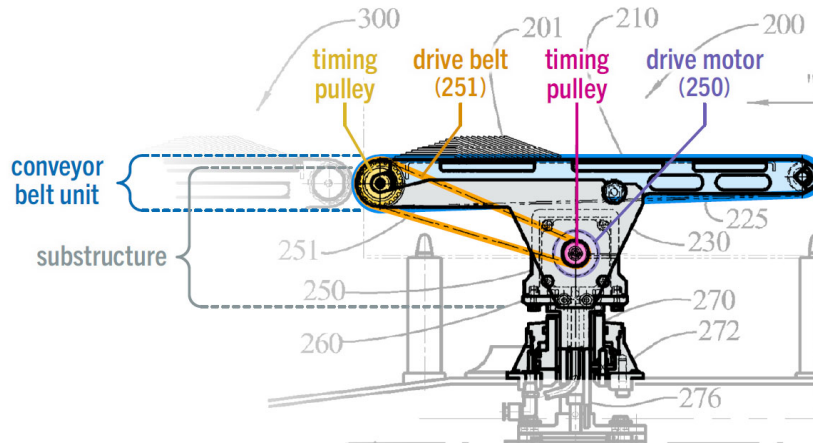


(EX1003, ¶190.)

Thus, McLaughlin teaches claim element 1[A].

3. Element 1[B]

McLaughlin discloses “a substructure (41) having a mount (11) coupled to the base (25); and.” As seen below, the McLaughlin substructure includes sidewalls 230 and horizontal plate 260. The substructure includes a mount in the form of the first and second attachment points. (EX1003, ¶197.) The conveying surface’s support frame 225 is attached to side walls 230 on both sides of the support frame. (EX1006, 3:44-46.) The side walls 230 are attached to the horizontal plate 260. (*Id.*, 3:46-48.)



(EX1003, ¶191.)

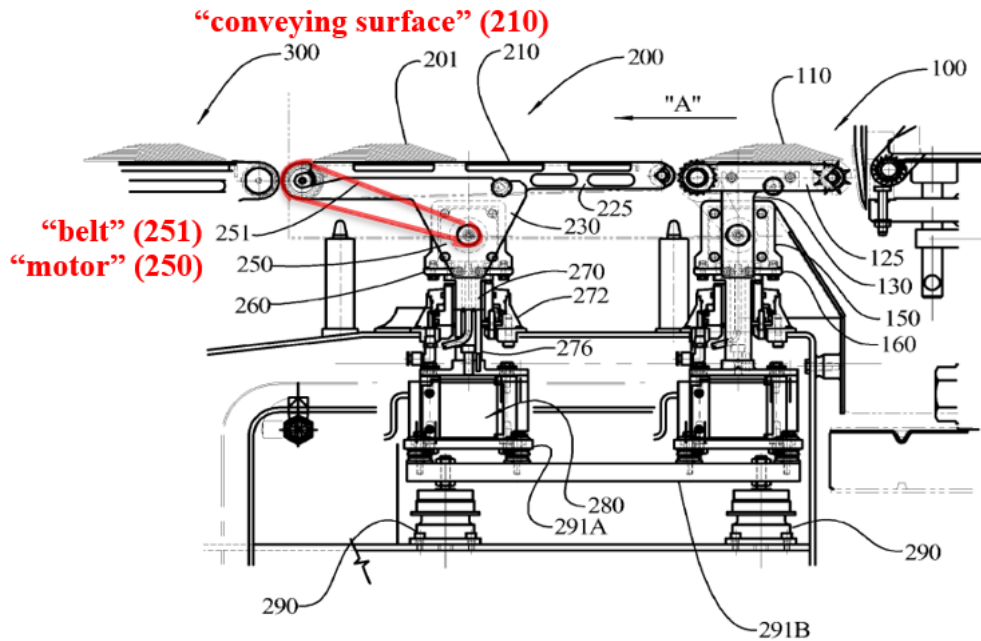
Thus, McLaughlin discloses claim element 1[B].

4. Element 1[C1]

McLaughlin discloses “a drive (15) coupled to the conveyor belt unit (13) by a drive belt (27).”

McLaughlin’s motor 250 corresponds to the claimed drive. (EX1003, ¶185, ¶192.) McLaughlin’s belt 251 corresponds to the claimed drive belt. (*Id.*) McLaughlin discloses that “[t]he conveying surface is driven by a belt 251 coupled to a motor 250.” (EX1006, 3:44-46.) Figure 2 discloses the motor 250 coupled to the conveyor belt unit by belt 251.

FIG. 2



(EX1003, ¶192.)

Thus, McLaughlin discloses claim element 1[C].

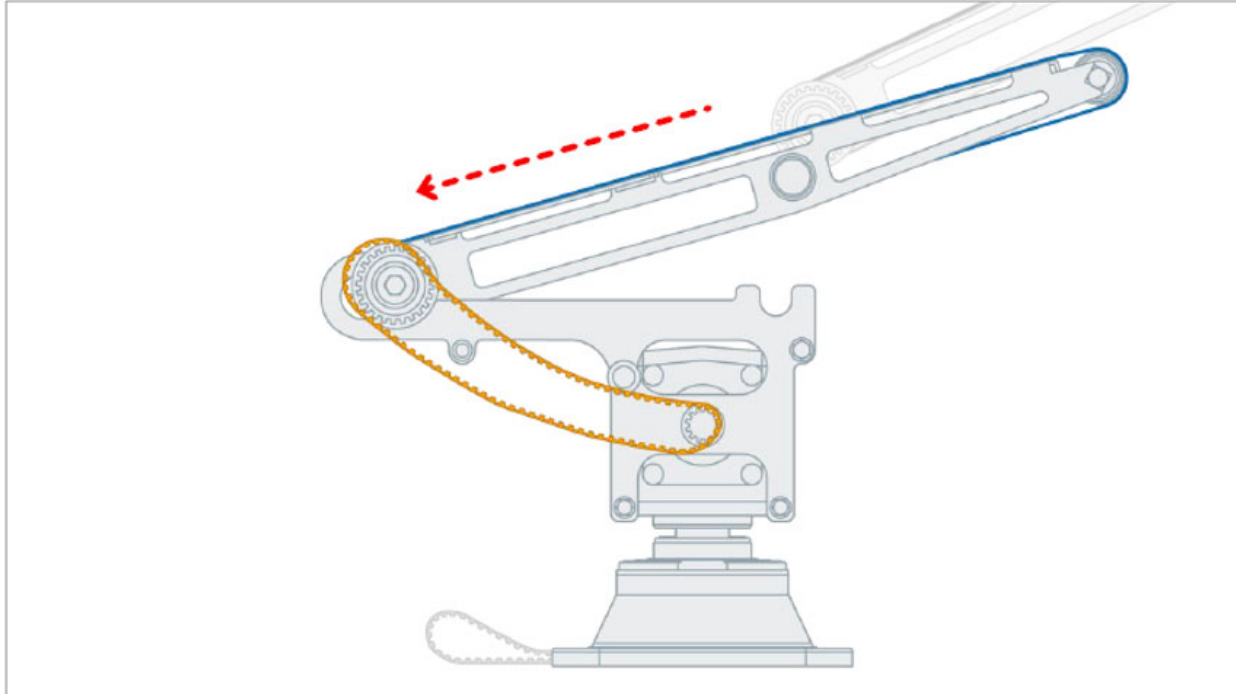
5. Element 1[C2]

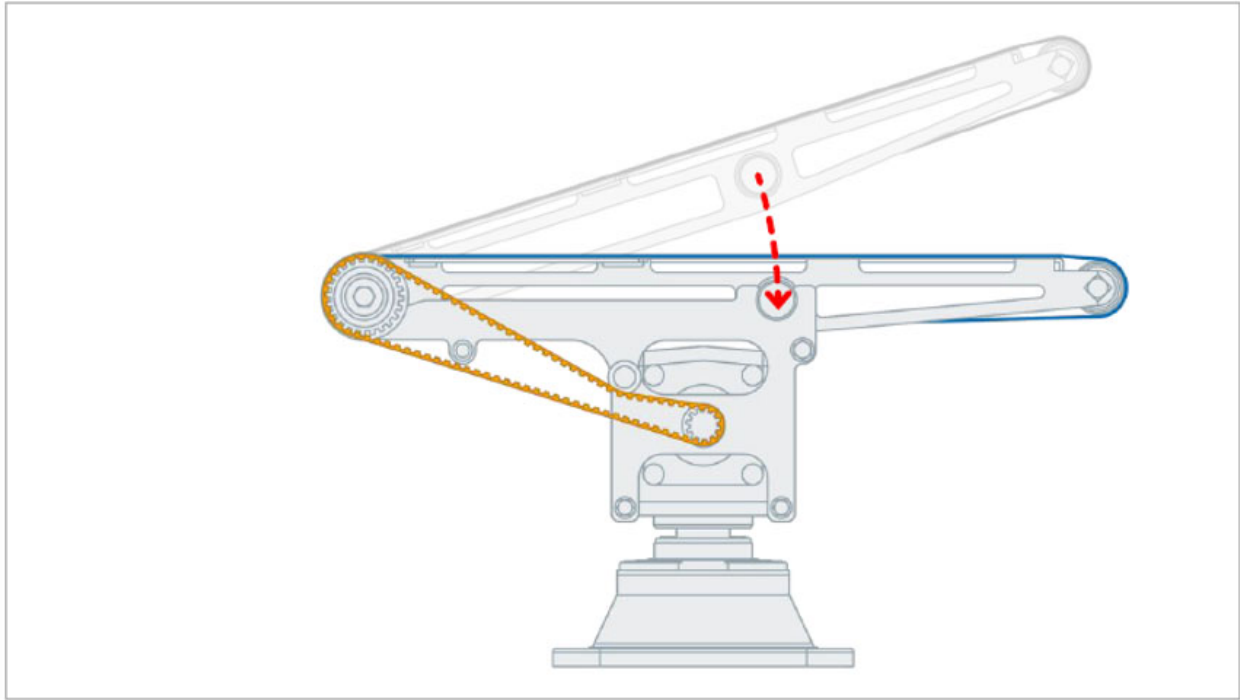
McLaughlin renders obvious “the conveyor belt unit (13) is configured to be cancelled by relaxing the drive belt (27) and is configured to be established by tautening the drive belt (2), with the relaxing and tautening of the drive belt (27) each being provided by a relative movement between the drive (15) and the conveyor belt unit (13).”

A POSA would have found it obvious that McLaughlin's conveying surface 210 and support frame 225 detach from the side walls 230 by a relative movement

between the drive and conveyor belt unit at least for the reasons discussed above in connection with claim element 1[A]. (EX1003, ¶193.)

Dr. Collins provides illustrations to show how Figure 2 renders obvious how the conveying surface 210 and support frame 225 are attached and detached from the side walls 230. (EX1003, ¶194.) Dr. Collins's figures illustrate that the following positions of support frame 225 would have been obvious to a POSA in light of the teachings of McLaughlin: (1) support frame 225 resting on side walls 230 before first attachment point is established, with drive belt loose; (2) support frame 225 pivoted down to establish second attachment point, with drive belt tightened. (*Id.*, ¶¶194-195.)





(EX1003, ¶194.)

Dr. Collins's includes additional figures that further illustrate that the tautening and relaxing of the drive belt would have been obvious to a POSA in light of the teachings of McLaughlin. (*Id.*, ¶195.) These movements would have been apparent to a POSA in view of the basic mechanics and functions described by McLaughlin.

Thus, McLaughlin renders obvious claim element 1[D].

The above disclosures would have been obvious to a POSA in light of the figures and specification of McLaughlin, as well as the POSA's knowledge of other relevant prior art. (EX1003, ¶196.) Indeed, removable conveyors were well-known

(*see* Section II.B) and there are similarities in the design, structure, and purpose of McLaughlin and other removeable conveyors. (*Id.*, ¶196)

Further, claim Element 1[D] would have been obvious over McLaughlin's check scale 200. A POSA would have had reason to make McLaughlin's check scale 200 a removable conveyor belt unit to simplify maintenance and cleaning processes. (EX1003, ¶196; *see also* EX1004, [Purpose], [0004]; EX1005, 10.) A POSA would have had a reasonable expectation of success in making McLaughlin's Figure 2 a removable conveyor belt unit because the design in Figure 2 indicates the check scale is removable. (EX1003, ¶197.) As in *KSR*, the idea that a POSA would think that McLaughlin does not disclose claim element 1[D] because it does not explicitly describe the removal steps that are rendered obvious by Figure 2 makes "little sense." *See KSR*, 550 U.S. at 420-21 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."). Here, McLaughlin's design provides an obvious example of a removable conveyor belt unit, and the prior art is replete with patents disclosing removable conveyor belt units. *Id.*

B. Dependent Claims 2 and 3

Claims 2 and 3 depend from claim 1 and further respectively recite "wherein the conveyor belt unit (13) is arranged in front of a cutting plane of the slicing apparatus, viewed in the conveying direction," and "wherein the conveyor belt unit

(13) is arranged behind a cutting plane of the slicing apparatus, viewed in the conveying direction.”

McLaughlin renders obvious claims 2 and 3. (EX1003, ¶¶198-199.) McLaughlin discloses conveyors that are in front of and behind the cutting plane of a slicing apparatus when viewed in the conveying direction. (EX1006, FIG1.) A POSA would have found it obvious to implement McLaughlin’s removable conveyor in front of or behind the cutting plane because this would be a simple substitution of known components that requires no change in the functionality of McLaughlin and yields a predictable result. (EX1003, ¶200.) A POSA would have had a reasonable expectation of success implementing McLaughlin’s removable conveyor in front of or behind the cutting plane. (EX1003, ¶200.)

Thus, claims 2 and 3 would have been obvious in view of McLaughlin.

C. Dependent Claims 4 and 14

Claims 4 and 14 depend from claim 1 and further respectively recite “the conveyor belt unit (13) has, viewed in the conveying direction, a belt length or conveyor length which amounts to less than 500 mm,” and “the conveyor belt unit (13) has a conveying width in the range from approximately 300 mm to 700 mm.”

McLaughlin in light of the knowledge of a POSA renders claims 4 and 14 obvious. (EX1003, ¶¶202-203.)

A POSA would have been motivated to implement these dimensions on a removable conveyor assembly with a reasonable expectation of success for the reasons discussed above in Section VIII.C. (*See also* EX1003, ¶¶204-208.)

Further, merely changing the size or proportion of a device does not give rise to a patentable invention. *See Powers-Kennedy Contracting Corp. v. Concrete Mixing & Conveying Co.*, 282 U.S. 175, 185 (1930) (“[O]bviously a mere change in proportion would involve no more than mechanical skill and would not amount to invention.”); *see also Gardnerv.TEC Syst., Inc.*, 725 F.2d 1338 (Fed. Cir. 1984). Changing the dimensions of a removable conveyor is a simple change yielding no unexpected results or functions. (EX1003, ¶¶208-209.)

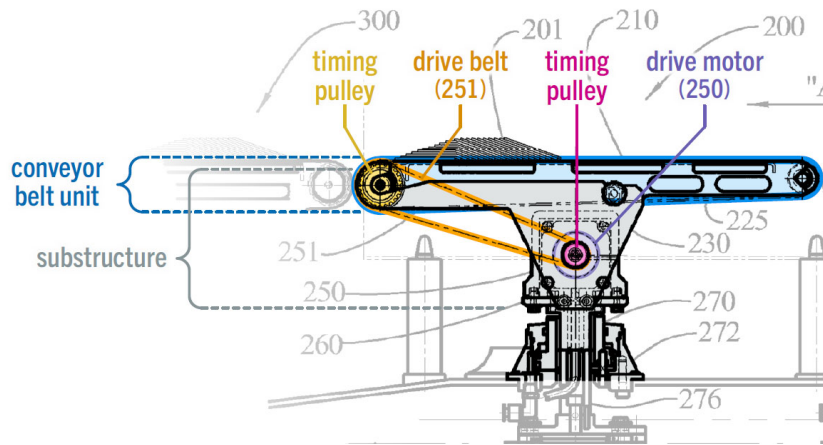
Thus, claims 4 and 14 would have been obvious in light of McLaughlin.

D. Dependent Claim 6

Claim 6 depends from claim 1 and further recites “wherein at least one drive motor (15) for the conveyor belt unit (13) is provided, with the drive motor (15) being directly coupled with the conveyor belt unit (13), and/or unit; and wherein the drive motor (15) is arranged beneath the conveyor belt unit (13).”

McLaughlin in light of the knowledge of a POSA renders claim 6 obvious. (EX1003, ¶¶210-211.) McLaughlin discloses a drive motor. (EX1006, 3:40-55; EX1003, ¶212.) McLaughlin discloses that “[t]he conveying surface is driven by a

belt 251 coupled to a motor 250.” (EX1006, 3:42-44; *see also* EX1006, FIG3, FIG4.) McLaughlin illustrates that the belt 251 is coupled to motor 250 and a drive pulley that is a part of check scale 200 (check scale 200 is the removable conveyor belt unit). (*See* EX1006, FIG2, FIG4.) Dr. Collins provides a figure illustrating that the conveyor belt unit includes a timing pulley that the belt 251 couples with.



(EX1003, ¶212.)

McLaughlin discloses “wherein the drive motor (15) is arranged beneath the conveyor belt unit (13).” (EX1003, ¶212.) Figures 2 and 4 of McLaughlin show that motor 250 is arranged beneath the removable conveyor belt unit 200. (EX1006, FIG2, FIG4.) Further, McLaughlin states that “[t]he conveying surface is driven by a belt 251 coupled to a motor 250, *situated beneath the conveying surface 210.*” (EX1006, 3:42-44 (emphasis added).)

Thus, McLaughlin renders obvious claim 6.

If it is determined that McLaughlin does not disclose “wherein the drive motor (15) is arranged beneath the conveyor belt unit (13)”, then this claim limitation and the claim as a whole would have been obvious in view of McLaughlin and the knowledge of a POSA. (EX1003, ¶213.)

A POSA would have been motivated to place the motor underneath the conveyor belt unit because this would have been a space saving arrangement. (EX1003, ¶213.) Space on factory floors in food processing plants is in high demand, and designing compact machines is, thus, an important consideration in the industry. (*Id.*)

Further, the Board has previously decided that dependent claims which add limitations regarding the location of motors do not have patentable weight in equipment like that disclosed in the '487 Patent. *See Weber, Inc. v. Provisur Technologies, Inc.*, IPR2022-00599, Paper 65 at 57-58 (P.T.A.B. Aug. 23, 2023) (“[T]he record reflects that a POSITA would have been aware that the motors could be placed on the same or opposite side of the driven conveyors.”) Here, the record reflects that a POSA would have been aware that motors could be placed beneath the conveyor, as disclosed in McLaughlin. (EX1006, 3:42-44, FIG2, FIG4.)

Additionally, the simple structural rearrangement of parts—such as placing a drive motor beneath a conveyor—especially if the functionality remains the same,

is an obvious matter of design choice. (EX1003, ¶212; *see also* M.P.E.P. §2144.04(VI)(C).) Also, the '487 patent does not identify any critical, unexpected, or beneficial results caused by placing the motor beneath the conveyors. (EX1003, ¶¶213-214.) Thus, a POSA would have had a reasonable expectation of success.

Thus, in addition, McLaughlin renders obvious claim 6. (EX1003, ¶215.)

E. Dependent Claim 9

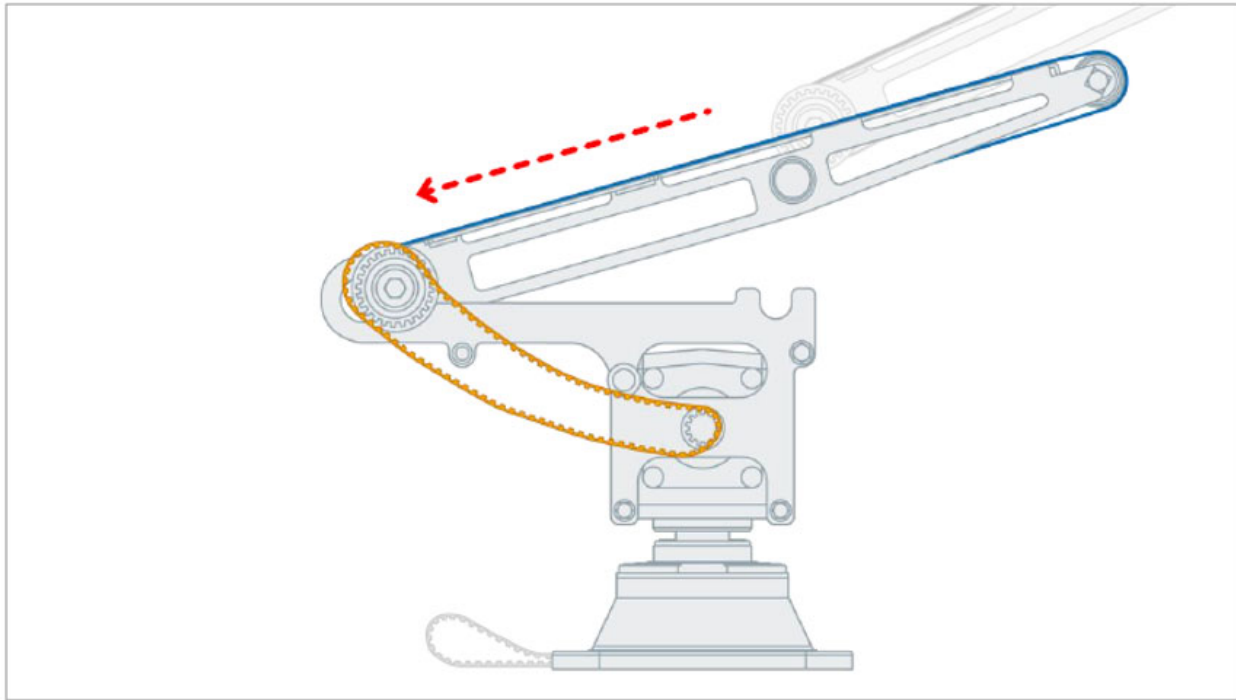
Claim 9 depends from claim 1 and further recites “wherein a respective relative movement is provided between the drive motor (15) and the conveyor belt unit (13) for cancelling and establishing a coupling between a drive motor (15) for the conveyor belt unit (13) and the conveyor belt unit; and wherein the spacing between the drive axle of the drive motor (15) and a drive axle of the conveyor belt unit (13) is configured to be varied by the relative movement.”

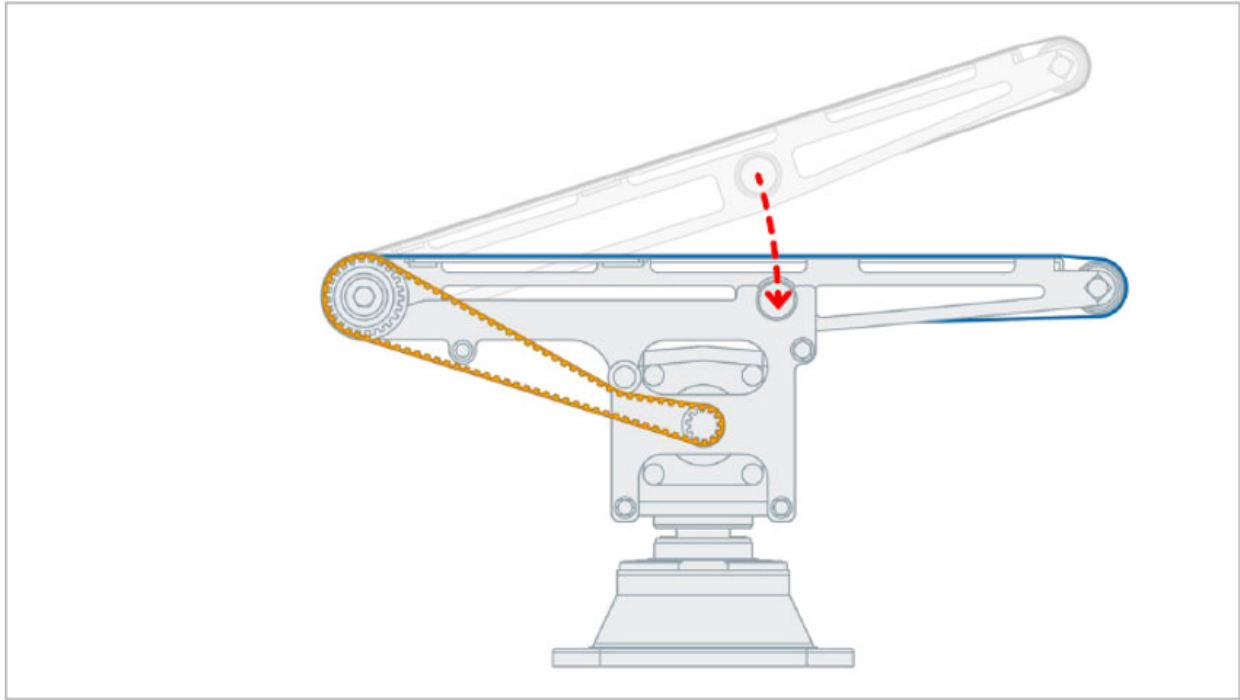
McLaughlin discloses claim 9. (EX1003, ¶¶216-217.) The same evidence addressed in Section IX.A.5 discloses this requirement. (EX1003, ¶217.)

McLaughlin discloses “wherein the spacing between a drive axle of the drive motor (15) and a drive axle of the conveyor belt unit (13) is configured to be varied by the relative movement.” (EX1003, ¶¶218-219.) The drive pulley on McLaughlin’s removable conveyor belt unit that belt 251 attaches to corresponds to

the conveyor belt unit's drive axle, while the drive pulley of the motor 250 corresponds to the drive axle of the drive motor. (*Id.*)

Dr. Collins provides the below figures that illustrate the relative movement that varies the spacing between the drive axles.





(EX1003, ¶218.)

Thus, McLaughlin renders obvious claim 9.

F. Dependent Claim 10

Claim 10 depends from claim 1 and further requires “a mount (11) is provided for the conveyor belt unit (13) which remains at the apparatus with a removed conveyor belt unit (13) and at which the conveyor belt unit (13) is configured to be latched, with the latched connection configured to be cancelled for removing the conveyor belt unit (13) and configured to be established for installing the conveyor belt unit (13).” (EX1003, ¶¶220-221.) The same McLaughlin evidence addressed in Section IX.A.3 discloses claim 10’s “a mount (11) is provided for the conveyor

belt unit (13) which remains at the apparatus with a removed conveyor belt unit (13).” (EX1003, ¶221.)

McLaughlin in light of the knowledge of a POSA renders obvious claim 10. (EX1003, ¶222.) Though McLaughlin does not explicitly teach a “latch” connection, a POSA would have been well aware of other prior art that discloses using latches to attach conveyor belt units to mounts. (*Id.*) For example, Lee discloses that its removable “conveyor assemblies” can be held in place by “common barrel-bolt latches.” (EX1012, [0047].) Lee teaches that a latch is desirable “to prevent the conveyor assemblies from being accidentally lifted out of position...[and to] reduce the likelihood that a conveyor assembly” might become disconnected “due to the reactive force created by the friction of a food product.” (*Id.*) Thus, implementing a latched connection would have been an obvious matter of design choice that would also provide benefits already articulated in the prior art. (EX1003, ¶223.) Also, the ’487 Patent does not identify any critical, unexpected, or beneficial results caused by using a latched connection. Thus, a POSA would have had a reasonable expectation of success (*Id.*) Further, using a latched connection would have been a simple addition of a known element that yields a predictable result. (*Id.*)

Thus, McLaughlin renders obvious claim 10.

G. Dependent Claim 15

Claim 15 depends from claim 1 and further recites “wherein at least one continuous belt or continuous band (55) or a plurality of parallel continuous straps (57) is/are provided as conveying means of the conveyor belt unit (13).”

McLaughlin in light of the knowledge of a POSA renders obvious claim 15. (EX1003, ¶¶225-226.) McLaughlin states “[t]he conveying surface can be one continuous surface or a series of belts arranged longitudinally along the direction of travel, as shown in FIG.1, or other conveying arrangements commonly known.” (EX1006, 4:29-32; *see also* FIG2, FIG4.)

Further, using one conveyor belt or a plurality of straps is a known example of a conveying means for a conveyor belt unit. (EX1003, ¶226.) Substituting one conveyor belt into McLaughlin would be a direct substitution that requires no change in functionality in McLaughlin. Thus a POSA would have had a reasonable expectation of success. (EX1003, ¶227.)

Thus, McLaughlin renders obvious claim 15.

H. Dependent Claim 16

Claim 16 depends from claim 1 and further recites “the conveyor belt unit (13) is configured to be removed and/or installed without tools.”

McLaughlin in light of the knowledge of a POSA renders obvious claim 16. (EX1003, ¶¶229-230.)

A POSA would understand that McLaughlin's check scale 200 could be removed without tools. (EX1003, ¶230.) Dr. Collins provides illustrations showing how McLaughlin's check scale 200 could be installed or removed without tools. At no point in its specification does McLaughlin discuss tools. (EX1006; EX1003, ¶230, ¶218.)

Additionally, a POSA would have been aware of other prior art that discusses tool-less conveyor removal. (EX1003, ¶¶231; EX1012, [0020] ("No tools are required to remove the conveyor assemblies 40A and 40B, which facilitates the cleaning and maintenance.")) These teachings, and the predictable use of known components taught by the prior art, would have given a POSA a reasonable expectation of success. (EX1003, ¶232.)

Thus, McLaughlin renders obvious claim 16.

I. Independent Claim 22

As discussed above in Section IX.A, McLaughlin renders obvious the subject matter as a whole of claim 1. The evidence for claim 1 preamble, [A] and [B] applies here to render obvious the subject matter of the corresponding elements of claim 22's preamble, [A], and [B]. (EX1003, ¶¶234-235, Appendix B.) In addition, McLaughlin renders obvious the additional requirements of claim 11[C1] and

22[C2], including the “second drive...” elements and the subject matter of the claim as a whole. (*Id.*)

1. Element 22[C1]

McLaughlin renders obvious “a first drive is coupled to the conveyor belt unit at the left side...when viewed in the conveying direction.” (EX1003, ¶236-237.) McLaughlin discloses a drive coupled to its conveyor belt unit at the left side when viewed in the conveying direction. (EX1004, FIG2, FIG4.)

Further, whether a drive is coupled to the left side, right side, or any other side is an obvious matter of design choice. Arranging the drive on the left or right side of the conveyor belt assembly is a simple structural rearrangement of parts. Such structural arrangement is an obvious matter of design choice, especially if the functionality remains the same. (M.P.E.P. §2144.04(VI)(C).)

2. Element 22[C2]

McLaughlin renders obvious the conveyor belt unit is coupled “at a second drive (15) at the right side, when viewed in the conveying direction” because it would have been obvious to modify McLaughlin to include a second lane with a second drive.⁹ (EX1003, ¶¶238-239.) McLaughlin states “[i]n other embodiments, it is possible to have multiple streams of conveying surfaces such that multiple drafts

⁹ See *supra* FN8.

are processed simultaneously using the present invention.” (EX1006, 5:11-14.)¹⁰ A POSA would have been aware of other prior art that discloses multiple drive food slicers. (EX1003, ¶239, ¶38.)

3. Element 22[C3]

McLaughlin renders obvious “the coupling between the drives (15) and the conveyor belt unit (13) is configured to be simultaneously cancelled and established for at least one of the first drive and the second drive.” (EX1003, ¶¶241-242.)

McLaughlin renders obvious the claimed “configured to be simultaneously cancelled and establish” operation as the belt becoming “loose” so it can be “easily removed.” (EX1006, FIG2, FIG4; EX1003, ¶243.)

It would have been obvious to design the conveyor belt unit such that the coupling between the first and second drive and the conveyor belt unit could be simultaneously cancelled/established. (EX1003, ¶245.) This would have only required a mirror image of McLaughlin’s disclosure. (*Id.*) A POSA would have been motivated to make the coupling between a first and a second drive configured to be simultaneously cancelled/established to simplify the installation/removal process. (*Id.*) Further, a POSA would have been motivated to simplify the

¹⁰ See *supra* FN6.

installation/removal process so as to reduce the machine down time required for maintenance and/or cleaning. (*Id.*) This would have led a POSA to a configuration with a removable conveyor belt unit that simultaneously cancelled/established both lanes.

Further, given a two-lane conveyor belt unit, designing that two-lane conveyor belt unit to cancel/establish the two drives simultaneously would have been an obvious simple structural rearrangement of parts. (EX1003, ¶245; *see also* M.P.E.P. §2144.04(VI)(C).) Also, the '487 Patent does not identify any critical, unexpected, or beneficial results caused by cancelling or establishing the two drives at the same time. (EX1003, ¶246.) The functionality of the conveyor belt unit (driving two lanes independently) would remain the same. (EX1003, ¶246.) To design a two-lane conveyor unit such that the two drives simultaneously establish/cancel, a POSA would only need to mirror McLaughlin's Figure 2 and align the conveyor unit drive pulleys (or gears) in the same axis so that a relative movement of the conveyor belt unit as compared to the drive motor would relax/establish the belts or disengage gears. (EX1003, ¶245.) McLaughlin renders obvious a relative movement that relaxes/establishes drive belts, and a POSA would have been aware of other prior art that discussed engaging/disengaging gears in conveyors. (EX1004, [0033]-[0040]; *see also* EX1007, [0224]-[0226].)

Thus, McLaughlin would have rendered obvious claim 22.

4. Reason to Modify

In light of McLaughlin's explicit teaching of "multiple streams of conveying surfaces," a POSA would have found it obvious to include a second lane with a second drive to increase production and throughput and decrease giveaway. (EX1003, ¶244.) Indeed, using two conveyors to feed into or out of a slicing machine was already a well-known arrangement to a POSA. (EX1018, 2:14-19; EX1007, Abstract, FIG56-FIG58; EX1003, ¶38.) Thus, it would have been obvious to include a second lane with a second drive in McLaughlin's conveyor apparatus.

In addition, it would have been obvious to modify McLaughlin such that the coupling between a first and second drive and the conveyor belt unit could be simultaneously cancelled/established. (EX1003, ¶245.) This would have only required a mirroring of McLaughlin's disclosure. (*Id.*) Because only a mirroring of McLaughlin would have been required, and because of the extensive relevant disclosures in the prior art, a POSA would have had a reasonable expectation of success. (*Id.*, ¶246.) A POSA would have been motivated to make the coupling between a first and second drive configured to be simultaneously cancelled/established to simplify the installation/removal process. (*Id.*, ¶245.)

Further, given a two-lane conveyor belt unit, designing that two-lane conveyor belt unit to cancel/establish the two drives simultaneously would have been an obvious simple structural duplication and rearrangement of parts. (EX1003, ¶246; *see also* M.P.E.P. §2144.04(VI)(B-C).)

Thus, McLaughlin would have rendered obvious claim 22.

X. GROUND 4: MCLAUGHLIN IN COMBINATION WITH KONISHI RENDERS OBVIOUS CLAIMS 1-4, 6, 9, 10, 14-16, 22.

A. Independent Claim 1

As shown in Section IX, McLaughlin discloses or renders obvious every element of claims 1-4, 6, 9, 10, 14-16, and 22, except McLaughlin, though it was obvious, does not explicitly disclose claim element [C2]: “the conveyor belt unit (13) is configured to be cancelled by relaxing the drive belt (27) and is configured to be established by tautening the drive belt (2), with the relaxing and tautening of the drive belt (27) each being provided by a relative movement between the drive (15) and the conveyor belt unit (13).” Konishi discloses Claim Element 1[C2] for the reasons discussed in Section VII.A.4. It would have been obvious to combine McLaughlin with Konishi in the manner described in Claim Element 1[C2]. (EX1003, ¶249.)

A POSA would have been motivated to combine McLaughlin and Konishi because Konishi provides several explicit reasons to use its removable conveyor

invention in a food processing application (like McLaughlin). (EX1003, ¶250-251.) Konishi's stated reasons to combine include improved maintenance, cleanliness, and efficiency. (EX1004, [0004], [0007].)

Konishi emphasizes the known desire in the food processing art "to be able to easily and efficiently perform various types of maintenance such as cleaning with water, inspection equipment, and repair on a regular or irregular basis in order to maintain good hygiene conditions." (EX1004, [0004].) It describes the purpose of its removable conveyor is to "maintain hygienic management" during required disassembles and without taking too much time in food processing applications. (EX1004, [0032].) Given these teachings, a POSA would have been motivated to apply the Konishi removable conveyor invention to improve other food processing applications in the same way, including slicers with check scale conveyors like McLaughlin. (EX1003, ¶¶252-255, ¶¶257-258.)

In addition, McLaughlin's teachings would have led a POSA to seek improved conveyor cleaning and sanitation procedures. (EX1003, ¶256.) McLaughlin discusses the risk of getting "food material" caught in hard to reach areas, and discusses "cleaning." (EX1006, 4:15-28.) This teaching would have led a POSA to consider other removable conveyor options in the food processing art, such as taught by Konishi. A POSA would have found it obvious to improve upon

the McLaughlin removable conveyor in light of the teachings of Konishi. (EX1003, ¶253.)

Third, a POSA would have had a reasonable expectation of success in combining McLaughlin and Konishi as claimed. (EX1003, ¶260.) A removable conveyor was a common, well-known arrangement for improving cleanliness and maintenance that engineers used in many industries, including food processing and slicing. (EX1003, ¶262.) The record includes multiple examples of removable conveyors. (EX1003, ¶263, ¶39.) A POSA would have known how to apply this kind of technology in a food slicing machine, such as McLaughlin, using routine components and techniques, such as shafts, gears, pulleys, belts, and rudimentary programming. (EX1003, ¶¶262-264.)

Furthermore, while bodily incorporation is not required to show obviousness, a POSA would have appreciated that the claimed combination would have been met by simply applying Konishi's conveyor removal steps to McLaughlin's readily removable conveyor. This would require no modification of McLaughlin's structure. (EX1003, ¶263.)

* * *

In sum, a POSA would have had a reason to combine Konishi and Lindee to arrive at the claimed invention with a reasonable expectation of success. Accordingly, claim 1 would have been obvious.

B. Dependent Claims 2-4, 6, 9, 10, 14-16

As shown in Section IX, McLaughlin discloses or renders obvious every element of claims 2-4, 6, 9, 10, 14-16. (EX1003, ¶266, Appendix A, Appendix B.) A POSA would have been motivated to combine McLaughlin and Konishi with a reasonable expectation of success for each dependent claim in light of the extensive prior art disclosures and the reasons discussed above in Section X.A.

C. Independent Claim 22

As shown in Section IX.I, McLaughlin discloses or renders obvious every element of claim 22, except McLaughlin does not explicitly disclose “the coupling between the drives (15) and the conveyor belt unit (13) is configured to be simultaneously cancelled and established for at least one of the first drive and the second drive.” McLaughlin discloses and renders obvious a two lane conveyor for the reasons discussed in Section IX.I. (*See also* EX1003, ¶267, Appendix B.) Konishi discloses and renders obvious cancelling and establishing drives for the reasons discussed in Section VII.A.4 and VIII.I.3. It would have been obvious to combine McLaughlin with Konishi in the manner in claim 22 with a reasonable likelihood of success for the reasons discussed in Section X.A. (EX1003, ¶268.) It

would have been obvious to combine McLaughlin and Konishi to arrive at a two lane conveyor for the reasons discussed in Section IX.I. (*Id.*, ¶¶267-268.)

Thus, McLaughlin in combination with Konishi renders obvious claim 22.

XI. DISCRETIONARY DENIAL WOULD BE INAPPROPRIATE.

The Board should not discretionarily deny this petition. On balance, the *Fintiv* factors weigh against denial. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential).

While no motion to stay pending IPR has been filed in the district court case, *Fintiv* factor one is neutral given that courts commonly stay cases upon IPR institution, including the W.D. Mo. where the district court case is pending. *See VMWare, Inc. v. Intell. Ventures II LLC*, IPR2020-00859, Paper 13 at 12 (P.T.A.B. Nov. 5, 2020) (finding factor one neutral, even though Petitioner had not previously sought a stay, and despite Patent Owner’s argument that the district court judge was “unlikely” to issue a stay pending IPR institution). In previous cases between the parties, the assigned district court judge has granted multiple stay motions. *See, e.g., Provisur v. Weber*, No. 21-cv-06113, Doc. #95 (W.D. Mo. Sept. 16, 2022); No. 20-cv-6069, Doc. #74 (W.D. Mo. April 8, 2021); No. 19-cv-6021, Doc. #43 (W.D. Mo. Aug. 29, 2019).

Fintiv factors two (trial date), three (investment in proceedings), and four (overlap of issues) also weigh against the Board’s exercising its discretion to deny institution.

This is Petitioner’s first and only petition against the ’487 patent. Petitioner filed this petition within months of Patent Owner asserting the ’487 patent (and three other patents) against Petitioner on August 24, 2023. The median time from filing to trial for civil cases in the W.D.Mo., the location of the parallel litigation, is 25.5 months. Using that statistic, trial would be around September 2025. Thus, a hearing in this proceeding would occur before the median time from filing to trial. *See USPTO Director’s Memorandum: Interim Procedure For Discretionary Denials In AIA Post-Grant Proceedings With Parallel District Court Litigation*, 3, 7 (June 21, 2022) (“Additionally, when considering the proximity of the district court’s trial date to the date when the PTAB final written decision will be due, the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.”).

Petitioner just recently answered the August 24, 2023 allegations on October 30, 2023, there has been no claim construction hearing or decision, fact and expert discovery is ongoing, and there have not been any depositions yet. The most recent supplemental scheduling order in the case sets the current close of fact discovery for

March 6, 2024, close of expert discovery for May 29, 2024, dispositive motions due, June 14, 2024, pre-trial order due October 23, 2024, and trial November 18, 2024. *Provisur v. Weber*, No. 21-cv-06113, Doc. #214 (W.D. Mo. Sept. 5, 2023).

Fintiv explained that “it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding.” *Fintiv*, IPR2020-00019, Paper 11 at 11. Patent Owner asserted the patents in August and identified its asserted claims on November 10, 2023. Accordingly, Petitioner has been diligent in pursuing its Petition within about three months.

Furthermore, there is not direct overlap of issues. The Petition challenges five claims that are not asserted in the district court, and the prior art grounds here are not the same as the district court. Petitioner will not raise the same grounds from this Petition in the district court.

Fintiv factor five is neutral because Petitioner and Patent Owner are the same parties as in the district court. *See Weatherford U.S. v. Enventure Global Tech., Inc.*, IPR2020-01684, Paper 16 at 11–13 (P.T.A.B. Apr. 14, 2021).

Finally, *Fintiv* factor six (other circumstances) weighs strongly against denying institution. *See Netflix, Inc. v. GOTV Streaming, LLC*, IPR2023-00757, Paper 11, *25-27 (P.T.A.B. Nov. 7, 2023) (granting institution and declining

discretionary denial in light of compelling merits, even though *Fintiv* factors (1) through (5) favored discretionary denial); *USPTO Director's Memorandum: Interim Procedure For Discretionary Denials In AIA Post-Grant Proceedings With Parallel District Court Litigation*, 3, 7 (June 21, 2022) (stating the Board “will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel district court litigation where a petition presents compelling evidence of unpatentability.”). In the ongoing district court litigation between the parties, Patent Owner’s related company, Weber, has petitioned for IPR of Provisur’s asserted patents more than ten times. Weber was never discretionarily denied—only denied on the merits—and was given the opportunity to have the Board review each of the patents that went to trial in the district court. Fairness dictates that Provisur be afforded the same opportunity.

This Petition has compelling merits and demonstrates that the claims of the ’487 patent are rendered anticipated or obvious based on a single reference and straightforward unpatentability theories.

Considering the *Fintiv* factors overall, institution would best serve the efficiency and integrity of the system.

XII. MANDATORY NOTICES (37 C.F.R. § 42.8(A)(1))

A. Real Parties in Interest

Petitioner Provisur Technologies, Inc. is the real party-in-interest.

B. Related Proceedings

The '487 is subject to the following civil action: *Provisur Technologies, Inc. v. Weber, Inc. et al.*, Case No 5-21-cv-06113 (WDMO), where Weber filed counterclaims on August 24, 2023, and Provisur filed counterclaims on October 27, 2023. Defendants have not yet answered Provisur's counterclaims.

C. Grounds for Standing

Provisur certifies that the '487 patent is eligible for IPR and that Provisur is not barred from requesting IPR of the '487 patent on the grounds in this Petition.

D. Counsel & Service Information

Pursuant to 37 C.F.R. 42.10(a), Petitioner appoints **Michael G. Babbitt** (Reg. No. 59,288) as its lead counsel and **Sara T. Horton** (Reg. No. 61,449), **Ren-how H. Harn** (Reg. No. 73,620), and **Mitchell M. Feldhake** (Reg. No. 79,902) as its backup counsel, all at the address: Willkie Farr & Gallagher LLP, 300 N LaSalle Dr., Chicago, IL 60654.

Petitioner consents to electronic service by email at the email addresses **mbabbitt@willkie.com**, **shorton@willkie.com**, **rharn@willkie.com**, **mfeldhake@willkie.com**, and **ProvisurPTAB@willkie.com**.

XIII. CONCLUSION

Provisur requests cancellation of the above claims of the '487 patent.

Respectfully submitted,

Dated: November 22, 2023

/Michael G. Babbitt/

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*Counsel for Petitioner Provisur
Technologies, Inc.*

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(a), this brief contains 13,977 words as counted by the word processing program used for its preparation (Microsoft Word 2013).

Respectfully submitted,

Dated: November 22, 2023

/Michael G. Babbitt/

Michael G. Babbitt (Reg. No. 59,288)

*Counsel for Petitioner Provisur
Technologies, Inc.*

CERTIFICATE OF SERVICE

I hereby certify that on November 22, 2023, I caused a true and correct copy of the foregoing materials:

- **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,457,487**

to be served via FedEx Express on November 22, 2023, in its entirety on the following:

CANTOR COLBURN LLP
20 Church Street
22nd Floor
Hartford, CT 06103
PAIR Correspondence Address for U.S. Patent No. 9,457,487

the above-captioned **PETITION FOR *INTER PARTES* REVIEW OF**

U.S. PATENT NO. 9,457,487 was also served via email on November 22, 2023,

in its entirety on:

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Petitioner knows this to be an additional address likely to effect service under 37 C.F.R. § 42.105.

Respectfully submitted,

Dated: November 22, 2023

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