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Paper 39
Date: May 28, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PROVISUR TECHNOLOGIES, INC.,
Petitioner,

v.

WEBER FOOD TECHNOLOGY GMBH,
Patent Owner.[1]

IPR2024-00235
Patent 8,529,321 B2

Before CARL M. DEFRANCO, RYAN H. FLAX, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

[1] After the petition was filed, Patent Owner filed a notice changing its name from Weber Maschinenbau Gmbh Breidenbach to the name currently in the case caption. *See* Paper 7.

Weber Food Technology Gmbh ("Weber") is the owner of US 8,529,321 B2 (Ex. 1001, "the '321 patent").[2] Provisur Technologies, Inc. ("Provisur") filed a petition requesting *inter partes* review of claims 1–6, 8, 10, and 14–16 of the '321 patent. Paper 2 ("Pet."). After considering the petition, we instituted *inter partes* review of all claims as challenged in the petition. Paper 8 ("Inst. Dec."). Weber, in due course, filed a patent owner response. Paper 16 ("PO Resp."). Provisur followed with a reply. Paper 33 ("Pet. Reply"). And Weber followed with a sur-reply. Paper 51 ("PO Sur-Reply").

We have jurisdiction over this *inter partes* review under 35 U.S.C. § 6. We held an oral hearing on January 15, 2025, a transcript of which is in the record. Paper 38 ("Hrg. Tr."). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a). For the reasons below, we determine that Provisur has shown, by a preponderance of the evidence, that claims 1–6, 8, 10, and 14–16 of the '321 patent are unpatentable under 35 U.S.C. §§ 102 and 103.

I. BACKGROUND

A. Related Matters

The '321 patent is the subject of a parallel district court action, *Provisur Technologies, Inc. v. Weber, Inc.,* No. 5-21-cv-06113 (W.D. Mo.) ("the parallel Missouri action"). *See* Paper 5, at 2. A jury trial was conducted in that case, but not completed. On February 4, 2025, the district court *sua sponte* ordered a mistrial due to unforeseen circumstances.

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[2] Weber identifies Textor Maschinenbau GmbH, Weber, Inc., Textor, Inc., and Weber Maschinenbau GmbH Neubrandenburg as additional real parties-in-interest. *See* Paper 5, 2.

B. The '321 Patent

The '321 patent describes an apparatus for separating at least a portion of a fat cover from a flesh component of a meat product in an automated process. Ex. 1001, Abstract, 2:19–37. A meat product generally comprises three components: rind, fat, and flesh. *Id.* at 1:14–17. To remove portions of the fat cover, i.e., the rind and fat, conventional systems measure the thickness of the fat cover with an insertable probe that detects changes in brightness of different tissues. *Id.* at 1:18–36. In these conventional systems, the "meat product is damaged by the insertion of the sensor," particularly when one or more sensors have to be "inserted at multiple sites of the product for a reliable" fat thickness determination. *Id.*

In contrast, the non-contact measurement device of the '321 patent determines "the thickness of a fat cover of a meat product without damaging the meat product." *Id.* at 1:37–2:5 (describing exemplary optical non-contact measurements using light detectors and a CCD camera); *see also id.* at 4:18–5:6. The measured thickness of the fat cover is then "transferred from the evaluation unit of the measurement device" to a control unit of a cutting device. *Id.* at 5:24–28. This control unit "determines the anatomy of the meat product [] from the measured result" and then selects a stored "travel profile"—which are "product dependent or anatomy-dependent" profiles that "effect a change in the setting of the cutter bar in dependence on the feed of the meat product [] to be processed." *Id.* at 5:24–43. As such, the position of the cutting blade "is variable relative to a product support" and "can be adapted to differently thick fat covers or the thickness can be set" for separation of a portion of the fat cover. *Id.* at 2:46–52.

C. The Challenged Claims

Of the challenged claims, claims 1 and 14 are independent. Claim 1, reproduced below (with Provisur's added sub-numbering), is illustrative of the challenged claims:

> [1.Pre] An apparatus for separation of a fat cover of a meat product from a flesh component of the meat product, comprising:
>
> [1.A] *a measurement device for automatic determination of the thickness of the fat cover*, wherein the determination of the thickness of the fat cover takes place in a contactless manner; and
>
> [1.B] cutting device coupled to the measurement device for automatic separation of the fat cover from the flesh component *in dependence on the thickness determined by the measurement device*, wherein the cutting device comprises:
>
> [1.C] a cutting blade whose position is variable relative to a product support; and
>
> [1.D] a control unit for control of the position of the cutting blade in dependence on the thickness determined by the measurement device,
>
> [1.E] wherein at least one travel profile is stored in the control unit in accordance with which the position of the cutting blade relative to the product support is to be set in dependence on a product feed.

Ex. 1001, 6:21–42 (emphasis added for limitations in dispute).

D. The Asserted Challenges

Claims Challenged	35 U.S.C. §	Basis
1–6, 8, 10, 14–16	102	Young[3]
1–6, 8, 10, 14–16	103(a)	Young, Norrie[4]
1–6, 8, 10, 14–16	103(a)	Johnson,[5] Belk[6]

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Provisur proposes that one of ordinary skill in the art would 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).

Pet. 12. Weber does not contest Provisur's framing of the level of ordinary skill in the art. *See generally* PO Resp. There being no dispute, we adopt Provisur's definition of the level of skill in the art.

B. Claim Construction

Provisur construes the claim terms "according to their plain and ordinary meanings as understood by a [person of ordinary skill in the art] in view of the specification and prosecution history" and posits that "[n]o terms require an explicit construction to resolve the unpatentability controversy between the parties here." Pet. 13. Weber appears to agree, stating in the related district court action that "most of [its] patent claims are plain and ordinary . . . [t]hey're not difficult or complex claims or claim terms." Ex.

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[3] US 5,514,032, issued May 7, 1996 (Ex. 1004, "Young").
[4] US 4,979,269, issued Dec. 25, 1990 (Ex. 1005, "Norrie").
[5] US 6,929,540 B2, issued Aug. 16, 2005 (Ex. 1006, "Johnson").
[6] US 6,198,834 B1, issued Mar. 6, 2001 (Ex. 1007, "Belk").

1028, 5. This being the case, we do not find the need to expressly construe any claim terms. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (confirming that the Board need not construe claim terms where their construction is not material to the dispute).

C. Ground 1—Anticipation by Young

We begin with Provisur's challenge of claims 1–6, 8, 10, and 14–16 as anticipated by Young. *See* Pet. 26–51. For this challenge, Provisur breaks independent claim 1 down into five parts—elements [1.A], [1.B], [1.C], [1.D], and [1.E] (as annotated above in section I.C.)—and explains exactly where and how Young teaches each of those claim elements. *See id.* at 27–42. Provisur provides a similar breakdown for independent claim 14. *See id.* at 46–49.

At the outset, we note that Weber does not dispute Provisur's showing that Young's fat/loin separation apparatus includes certain basic components of claims 1 and 14:

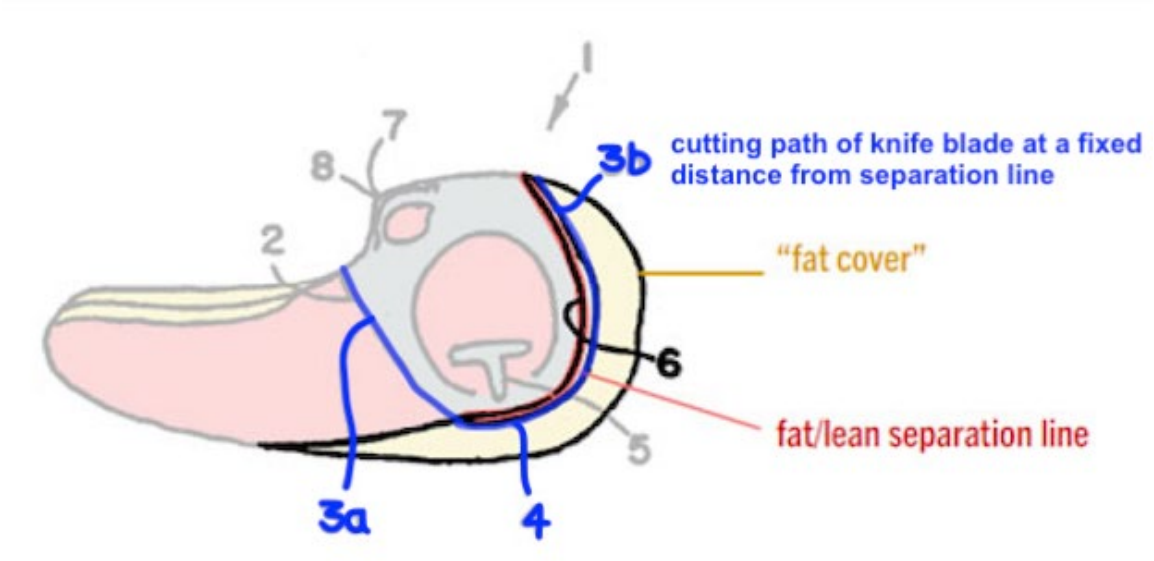
> (1) "*a measurement device*" = Young's imaging system 190, which controls top plan camera 196, end view camera 197, and fat line camera 198, to provide physical dimensions and characteristics of a side of meat for generating cutting profiles. Pet. 29–30 (citing Ex. 1004, 17:34–46, 17: 55–62, 18:46–56, Fig. 2);
>
> (2) "*a cutting blade whose position is variable relative to a product support*" = Young's knife blade assembly 100, which includes four axes of motion for U-shaped knife blade 121. *Id.* at 37–38 (citing Ex. 1004, 5:52–55, 14:21–26);
>
> (3) "*a control unit for control of the position of the cutting blade*" = Young's controller 172, which receives signals from imaging system 190 and generates cutting profiles based on data

received from imaging system 190. *Id.* at 38–39 (citing Ex. 1004, 17:1–12, 17:24–34, 18:33–46); and

(4) "*at least one travel profile is stored in the control unit in accordance with which the position of the cutting blade relative to the product support is to be set in dependence on a product feed*" = Young's "cutting profile" for controlling the position of the cutting blade based on data received from imaging system 190. *Id.* at 40–41 (citing Ex. 1004, 17:1–12, 17:30–35, 21:23–33, 22:33–41).

Here, the parties' dispute centers on whether Young's imaging system 190, which Provisur maps to the claimed "measurement device," makes a "determination of the thickness of the fat cover," as claimed, and further whether Young's cutting blade is positioned "in dependence on the thickness determined by the measurement device," as also claimed.[7] *See* PO Resp. 14–24. More specifically, Weber contends that Young "does not measure the thickness of the fat cover" and "is agnostic as to the thickness removed from the meat product." *Id.* at 17. In support, Weber annotates Young's Figure 10C, reproduced below, while asserting that "Young's system simply identifies the line between the fat cover and the lean meat (fat/lean separation line) and uses this internal line as a reference for its cutting path" to which "a user-defined offset value is added, allowing the user to define the amount of fat cover left behind after cutting." *Id.* at 18.

[7] The parties appear to agree that "determination of the thickness of the fat cover" refers to the thickness of the fat cover *before* the side of meat is cut and trimmed, as opposed to what the '321 patent refers to as the "expected" value of the thickness of the fat cover after cutting and trimming. Ex. 1001, 3:30–34, 8:6–10.



The above image is Young's Figure 10C, which is annotated to show leaner meat (pink), fat cover (yellow), a fat/lean separation line (red), and a cutting profile (blue) of the knife. According to Weber, "only *two variables* [in Young] define the cutting profile: the lean/fat separation line and the user-defined preset distance from the lean/fat separation line, which defines how much fat cover remains after cutting." PO Resp. 20 (citing Ex. 1004, 4:5–13). In other words, Weber contends, Young "uses an internal fat/lean separation line as a reference" to determine the cut line, which means "the cut line remains the same even if the fat thickness changes." *Id.* at 21 (citing Ex. 2007 ¶ 43). As such, Weber surmises that "a POSITA would understand that Young's system does not set that cut line 'in dependence on' a determined fat thickness, as claimed" because "there is no teaching or suggestion in Young that its system ever determines how much fat is being removed, how much fat existed to begin with, or any other fat thickness-specific determination." *Id.* at 22 (citing Ex. 2007 ¶ 44).

We disagree with Weber's position. To begin, we note Weber's admission that "Young does indeed determine a specific thickness of fat to

be *retained* on the pork loin after cutting." PO Resp. 24 (citing Ex. 2007 ¶ 46) (emphasis added). Weber cannot contend otherwise, given Young's disclosure that its "imaging system 190" *and* "imaging processing routine 240" together "generate custom cutting profiles . . . *based upon the particular dimensions, contours, etc.* of a specific side of meat" and "[t]hrough control of the knife blade along several axes . . . *produce[] an optimum separation between loin and belly, with a desired fat covering left on the loin*." Ex. 1004, 2:57–63, 10:37–42 (emphasis added). In other words, it is undisputed that Young makes a determination of fat thickness that is to remain on the meat based upon the dimensions and contours of the particular side of meat being trimmed.

Nonetheless, Weber contends that Young's determination is made without first determining how much fat existed to begin with, i.e., prior to the side of meat being trimmed. But, as Provisur correctly notes, Weber ignores what one skilled in the art reasonably would have understood from reading Young's disclosure *as a whole*. *See* Pet. 30–36 (citing Ex. 1003 ¶¶ 104–106, 109–112); Pet. Reply 2–12. When that is done, one skilled in the art would have understood that a necessary premise of Young's determination of the thickness of fat to remain on the loin is knowing the thickness of the fat to begin with, which Young's imaging system 190 *and* imaging processing routine 240 determine by first analyzing a series of "fat/lean separation lines" and "edge lines" in the side of meat being trimmed. Pet. 30–32 (citing Ex. 1004, 17:34–62, 18:33–56, 22:53–24:38, Figs. 2, 13); Pet. Reply 3–7 (citing portions of *same* evidence).

More specifically, as described in Young (and articulated by Provisur), the side of meat is placed fat side down on a product support, i.e.,

platen 20. *See* Ex. 1004, 7:16–21, Figs. 1, 2. Using several cameras—top plan camera 196, end view camera 197, and fat line camera 198—Young's *imaging system 190* acquires multiple images of the side of meat from various angles and under various lighting conditions to "provide image data regarding each side of [meat]." *See id.* at 17:34–18:56. That image data is then used by Young's *image processing routine 240* to generate a series of demarcation lines on the side of meat, including: (1) *fat/lean separation lines* (representing the interface between the loin meat and the fat layer along top, side, and end views of the meat product; and (2) *edge lines* (representing lines along the outer surface of the meat product). *See id.* at 22:53–23:67, Figs. 10, 13 (Blocks 242, 246, 250, 254). In addition, "a plurality of points (preferably 20) are generated for each of the fat/lean separation and edge lines using known pattern matching routines." *Id.* at 23:28–30, Fig. 13 (Blocks 244, 248, 252, 256); *see also id.* at 23:61–63 (essentially same).

The fat/lean separation and edge lines (and points therein) generated by Young's image processing routine 240 are then used to calculate certain dimensions and characteristics of the side of meat, such as height, length, and width. *Id.* at 24:10–22, Fig. 13 (Block 258). As Provisur's expert credibly testifies, one skilled in the art would have understood that the dimension from the fat/lean separation line to the edge line along the outer surface represents the thickness of fat cover on the side of meat, i.e., before the fat is trimmed. *See* Ex. 1003 ¶ 106. Insofar as how that dimension is used, Young states that controller 172 uses "dynamic (real time) image data" of the fat/lean separation and edge lines "to dynamically modify the cutting profile of the loin knife assembly 100 so that the assembly follows a fixed

distance from the separation line to provide the optimum fat cover for the loin." Ex. 1004, 18:32–45; *see also id.* at 17:48–52 (describing "real time processor" for "image processing routines"). Notably, according to Young, the "fixed distance" represents the "desired" thickness of fat that remains on the loin, after trimming, and "sufficiently keeps the loin from drying out, but doesn't make the loin look too fat," although "[o]ther fat thicknesses may be desired in the alternative." *Id.* at 20:60–66; *see also id.* at 10:39–42 ("Through control of the knife blade along several axes, assembly 100 preferably produces an *optimum* separation between loin and belly, with a *desired* fat covering left on the loin." (emphases added)).

Because the *desired* thickness of fat cover is what remains on the loin after trimming, one skilled in the art would appreciate that Young's imaging processing routine 240 necessarily determines the thickness of the fat cover to begin with so that the knife assembly is always slicing through fat as opposed to cutting into loin (or worse yet, cutting into the platen on which the side of meat lies fat-side down). *See* Ex. 1003 ¶¶ 111. In this way, Young's knife assembly cuts a desired thickness of fat cover for the loin in dependence on the fat thickness measurement obtained from Young's imaging system 190 and image processing routine 240. Thus, we find that one skilled in the art would have understood that Young's system necessarily determines the thickness of the fat cover on the side of meat before cutting a desired thickness of fat cover in dependence on that determination.

Weber does not dispute Young's disclosure of the remaining elements of the claims, and after reviewing Provisur's showing, we find that Young discloses those undisputed claim elements. *See* Pet. 27–29, 33–41. Thus,

we find that Provisur demonstrates, by a preponderance of the evidence, that the challenged claims are anticipated by Young.

Having so concluded, we would be remiss if we did not address an argument that Weber considers vital to its dispute of Provisur's showing for the claimed fat thickness determination. During oral hearing, Weber repeatedly argued that Provisur changed theories midstream, i.e., between the time of the petition and the hearing. *See* Hrg. Tr. 22:18–24:47; *see also id.* at 31:14–22, 33:8–18, 34:16–20, 49:17–50:15, 54:16–56:25 (repeating same argument). More specifically, according to Weber, Provisur originally relied only on image data from Young's "top view" camera as processed in "block 246" of Young's image processing routine 240 when showing how Young meets the claimed fat thickness determination, whereas now Provisur relies on image data from Young's "end view" cameras as processed in "Block 254." *Compare* PO Sur-Reply 3–6 (focusing on Young's "top view camera" in "block 246"), *with* Hrg. Tr. 27:4–16 ("[Block] 246, which is what they relied on, is processing images from the top-view camera in Young's system. It is generating lines from the top-view camera in Young's system. *What they are newly trying to rely on today, for the first time, is Block 254 that is discussed toward the bottom of column 23 in Young, and that analyzes different images from a different camera. It is the end camera. It generates different lines. It demonstrates an end fat/lean line and an end edge line.* Prior to today's hearing, neither Petitioner, nor its expert, had ever discussed Block 254. You will not find a single reference to 254 in their papers, *nor have they discussed the end edge line*. It is completely new today. It finds absolutely no support in the record." (emphases added)).

We disagree with Weber's contention. As shown and described in the petition, Provisur relies on more than simply Young's "top view" camera and "block 246." *See* Pet. 29–31. Rather, in its petition, Provisur annotates Young's Figure 2 to show that image data from *all three cameras* of "imaging system 190"—"top plan camera 196, end view camera 197, [and] fat line camera 198"—play a role in the determination of fat thickness.[8] *Id.* at 30. Moreover, Provisur cites the entire process depicted in "Figure 13" and described in columns "22:53–24:38" of Young as critical to the determination. *Id.* at 31. Those cited portions of Young involve not only the analysis of fat/lean and edge lines from "top view" images (block 246), but also the analysis of fat/lean and edge lines from "end view" images (blocks 250 and 254). *See* Ex. 1004, 23:12–24:13. In other words, Provisur's showing for the claimed fat thickness determination is based on Young's collective analysis of all those images. Indeed, Provisur's expert confirms as much when confronted by Weber on cross-examination—

> Q. How does [Young] use the other cameras to identify that fat/lean separation line?
>
> A. Again, this is a -- this is a three-dimensional product that's not regular, and *all the views basically are needed* to be able to describe that complex three-dimensional shape, so that the knife will be able to cut at that -- at that line, offset by whatever desired thickness there is, on that three-dimensional shape.

Ex. 2006, 25:15–27:19 (emphasis added).

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[8] Indeed, contrary to Weber's assertion, Provisur highlights "fat lean separation camera 198," not top view camera 196, as most critical to the determination of fat thickness. Pet. 31.

In the end, we reject the notion that Provisur changed theories midstream. Rather, we find that Provisur has consistently, and unequivocally, relied on the entirety of Young's "imaging system 190" and Young's "image processing routine 240" in support of Young's disclosure of the claimed fat thickness determination. Thus, Weber's attempt to limit Provisur's argument to the use of only Young's top view camera and block 246 is not well-taken.[9]

Having considered the evidence of record and the parties' arguments, we find that Provisur proves, by a preponderance of the evidence, that independent claims 1 and 14 are unpatentable as anticipated by Young. Weber offers no response to Provisur's challenge of dependent claims 2–6, 8, 10, 15, and 16 as being anticipated by Young, and relies on its argument against Provisur's challenge of base claims 1 and 14. *Compare* Pet. 42–46, 49–50 (challenging dependent claims), *with* PO Resp. 14–24 (disputing only Young's disclosure of elements of claim 1). We have reviewed Provisur's showing for the dependent claims on this same ground, and find it persuasive. Thus, we conclude that Provisur also demonstrates, by a preponderance of the evidence, that dependent claims 2–6, 8, 10, 15, and 16 are unpatentable as anticipated by Young.

[9] And, to the extent it may highlight certain steps/blocks of Figure 13 in its analysis, Provisur nonetheless makes clear that it is the image data from all of Young's cameras and the determination steps from all of Young's image processing routine that form the basis of its showing—"Young's *multiple cameras* image the meat product, after which Young's image processing system makes *multiple determinations* based on the image data, including determination of the fat thickness of the fat cover." Pet. Reply 11.

D. Ground 2—Obviousness Over Young and Norrie

To the extent Young does not disclose the "determination of the thickness of the fat cover," Provisur relies on Norrie for that teaching, and, thus, argues that claims 1–6, 8, 10, and 14–16 would have been obvious over the combined teachings of Young and Norrie. *See* Pet. 51–54. More specifically, according to Provisur, Norrie expressly teaches "a device for sensing the *thickness* of back fat on the loin portion [of a meat product] between the conveyor and the lean portion of the loin." *Id.* at 52 (citing Ex. 1005, Abstract). With that in mind, Provisur contends that one of ordinary skill in the art would have found it obvious to combine the teachings of Young and Norrie because: (1) both are directed to "an automated loin separation system" that overcomes "the problems associated with manual loin separation processes;" and (2) Young expressly recognizes the advantage of modifying its system to include "additional imaging and motion functionality," such as that taught by Norrie. *Id.* at 52–53 (citing Ex. 1003 ¶¶ 175–177).

We agree with Provisur's position. Like Young, Norrie is directed to a method and apparatus for trimming fat from the loin portion of a side of meat. *See* Ex. 1005, Abstract. In particular, Norrie teaches a camera/light source 54 that "functions to observe and sense the *thickness of the portion of fat* the loin lying lowermost on the conveyor as it approaches the knife blade" such that "[t]he knife blade is then adjusted automatically." *Id.* at 3:51–59 (emphasis added); *see also id.* at 4:27–37 (explaining that "camera 54 will observe the *thickness of fat* on the underside of the loin" and "send appropriate fat signals to the computer," which, in turn, "will signal the blade solenoid 41 so as to adjust the position of the blade 34." (emphasis

added)). And, as Provisur correctly notes, one of ordinary skill in the art would have been drawn to Norrie's teaching of sensing the thickness of the fat on the loin because Young itself provides explicit support for modifying the functionality of its imaging system to achieve "greater control, customization, and consistency, as well as to optimize yield and reduce waste." Pet. 53 (citing Ex. 1004, 2:43–50, 20:17–24).

We agree. Young clearly foresaw the advantage of modifying its loin separation system to include additional imaging and control functionality for the cutting blade—

> Various modifications and changes may be made to control system 170 consistent with the invention. For example, *additional imaging and motion functionality may be included to provide more sophisticated profiles using the preferred scribe saw and loin knife assemblies*. Also, the design of control system 170 may be modified to incorporate different accessory components on apparatus 10. Other modifications will be appreciated by one skilled in the art.

Ex. 1004, 20:17–24. With that disclosure in mind, Provisur's expert credibly testifies that one of ordinary skill in the art reasonably would have known that the functionality of Norrie's camera could be incorporated into Young's imaging system in order to further optimize the determination of the desired fat thickness of the side of meat being processed. *See* Ex. 1003 ¶¶ 176–177. We find that testimony persuasive and fully supported by the evidence.

We have considered Weber's arguments to the contrary, but do not find them persuasive. *See* PO Resp. 24–32. At the outset, we note that Weber does not dispute that Norrie teaches automatically determining the thickness of fat cover on a side of meat and separating the fat cover in

dependence on that determined thickness. *See* Ex. 1036, 57:8–12; *see also id.* at 84:10–13. Nor could it reasonably do so, as Norrie expressly discloses such determination and functionality. *See* Ex. 1005, 3:51–59, 4:27–37, 5:20–26. Rather, Weber's contention rests with Provisur's purported failure to provide a sufficient reason to combine Norrie's teaching of determining fat thickness with Young's fat/loin trimming system.

More specifically, Weber contends that "[n]either [Provisur] nor its expert propose any *specific* modifications to Young's process, nor do they explain how Young's fat thickness-agnostic process would make use of fat thickness information." PO Resp. 25 (emphasis added). Weber further contends that Provisur's incorporation of "Norrie's fat thickness sensing functionality" into Young's system amounts to a "drastic theory shift" that "contrasts sharply with the Petition, which proposed adding Norrie's camera hardware to improve Young's system." PO Sur-Reply 15–16. We disagree.

Provisur's petition is quite clear in its reliance on incorporating the *functionality* of Norrie's camera, not necessarily the camera itself, into Young's system—"A POSA looking at Young would have been directly led to Norrie to achieve *additional imaging functionality*, such as Norrie's thickness sensing. . . . A POSA would have been able to *apply the determination of thickness* by the camera and controller taught in Norrie *in the context of Young's camera*." Pet. 53 (emphasis added). Those statements make clear that Provisur's proposed modification of Young's system rests, *not* on replacing Young's camera with Norrie's camera, but rather on adding the fat-thickness sensing functionality of Norrie's camera to the existing functionality of Young's imaging system. Indeed, Provisur's expert confirms as much, credibly explaining that one of ordinary skill in the

art, reading Young, immediately would have been drawn to Norrie's fat measurement process because, *first*, Young cites Norrie as analogous art with a similar goal of optimizing the fat-trimming process, and, *second*, Young foresaw that adding "increased functionality" to its imaging and control systems would further optimize the fat-trimming process by providing a more sophisticated cutting profile and that such modification would involve nothing more than a "routine software modification."[10] Ex. 1003 ¶¶ 176–177. That reasoning, in our view, provides ample detail as to why one of ordinary skill in the art would have incorporated the functionality of Norrie's fat measurement determination into Young's more sophisticated imaging and control systems, i.e., a reason to combine and modify with a rational underpinning. Thus, we reject Weber's arguments that Provisur's reason for the proposed combination lacks sufficient detail or amounts to a drastic theory change.

Next, Weber argues that Young "teaches away" from the proposed combination with Norrie because "Young disparages systems such as Norrie." PO Resp. 30. According to Weber, Young disparages Norrie "as an unsophisticated system that should be avoided" because it is "*limited in the degree of control*" it provides to its cutting blade by allowing "only one axis of motion . . . up or down." *Id.* (citing Ex. 1005, 2:30–34). As such,

[10] We acknowledge that Provisur and its expert offer "another example" of a possible modification that implements Norrie's camera in Young's imaging system as a "routine change of components," but the fact remains that Provisur's primary example centers on modifying Young's imaging and control system to incorporate the "functionality" of Norrie's fat-thickness determination in Young's system as a "routine software modification." Ex. 1003 ¶ 177.

Weber surmises that one skilled in the art "would have understood that Norrie did not provide a more sophisticated profile but a simpler, less sophisticated profile," and, thus, "would have been discouraged from implementing Norrie's simple approach in Young's more sophisticated system." *Id.* at 31–32.

We disagree for the simple reason that Weber's argument suggests that one skilled in the art would never modify a sophisticated system, such as Young's, by looking to a simpler, less sophisticated system, such as Norrie's, in this case, adding one more relevant data point to a set of other related data points. That argument makes no sense. If one of ordinary skill in the art sees a need for improving an existing system, they would naturally look to whatever system provides a potential solution, regardless of its simplicity or complexity. Indeed, Young cites Norrie for its relevant disclosure of a related "automated loin separation" system with imaging capabilities. Ex. 1004, code (56), 2:18–26.

Although Young may criticize Norrie's fat-trimming knife for having a limited range of movement, Young nonetheless acknowledges that Norrie's system "result[s] in more efficiency and more repeatable results." Ex. 1004, 2:25–29. It is undisputed that Norrie's system achieves those objectives through its fat-thickness imaging and sensing. And, it is undisputed that Young's recognizes, *first*, the need to "offer[] greater control over the loin knife . . . to optimize yield and reduce amount of waste product," and, *second,* as a further solution to that need, "additional imaging and motion functionality may be included" for the lion knife assembly. *Id.* at 2:43–50, 20:17–21, respectively. Because one of ordinary skill in the art would have recognized that implementing Norrie's teaching of fat-thickness

sensing as a routine software change to Young's image processing system would achieve Young's objectives of providing greater control over Young's knife and reducing waste and optimizing yield in the cutting profile of Young's multi-axis blade, we find that Provisur provides sufficient reasoning, supported by rational underpinning, to combine the respective teachings of Young and Norrie. *See* Ex. 1003 ¶¶ 176–177; Ex. 1035 ¶¶ 32, 35–36. Thus, we reject the notion that Young teaches away from applying Norrie's fat-thickness sensing to Young's imaging system and image processing routine for trimming fat off a side of meat.

Weber does not otherwise dispute Provisur's challenge to claims 1–6, 8, 10, and 14–16 as obvious over the combined teachings of Young and Norrie. *See* PO Resp. 24–32. Based on our review of the complete record, we find that Provisur provides sufficient proof that Young and Norrie disclose all the elements of the challenged claims and that one of ordinary skill in the art would have found it obvious to combine their respective teachings with a reasonable expectation of success. *See* Pet. 51–54 (citing Ex. 1003 ¶¶ 167–179); Pet. Reply 12–19. Thus, we find that Provisur, demonstrates, by a preponderance of the evidence, that claims 1–6, 8, 10, and 14–16 are unpatentable as obvious over the combined teachings of Young and Norrie.

E. Ground 3—Obviousness Over Johnson and Belk

Provisur also challenges claims 1–6, 8, 10, and 14–16 as obvious over Johnson and Belk. *See* Pet. 54–73; Pet. Reply 19–27. Having already determined that these same claims are unpatentable as anticipated by Young and/or as obvious over Young and Norrie, we need not reach this alternative challenge. *See Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984,

990 (Fed. Cir. 2020) (non-precedential) (recognizing that the "Board need not address issues that are not necessary to the resolution of the proceeding" and has "discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims").

III. CONCLUSION

For the above reasons, we determine that Provisur demonstrates, by a preponderance of the evidence, that claims 1–6, 8, 10, and 14–16 of the '321 patent are unpatentable under 35 U.S.C. §§ 102 and 103. In particular, we resolve the asserted grounds as follows:

Claims Challenged	**35 U.S.C. §**	**Basis**	**Claims Shown Unpatentable**	**Claims Not Shown Unpatentable**
1–6, 8, 10, 14–16	102	Young	1–6, 8, 10, 14–16	
1–6, 8, 10, 14–16	103	Young, Norrie	1–6, 8, 10, 14–16	
1–6, 8, 10, 14–16	103	Johnson, Belk[11]		
Overall Outcome			1–6, 8, 10, 14–16	

IV. ORDER

Accordingly, it is:

ORDERED that, pursuant to 35 U.S.C. § 318(a), claims 1–6, 8, 10, 14–16 of the '321 patent have been shown to be *unpatentable*; and

[11] We do not reach this ground given our determination that claims 1–6, 8, 10, and 14–16 are unpatentable on the Young-based grounds.

FURTHER ORDERED that any party seeking judicial review of this decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.[12]

[12] Should Weber wish to pursue amendment of any of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this Decision, we draw Weber's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). We remind Weber of its continuing obligation to notify the Board of any such related matters in an updated mandatory notice. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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