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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ELMAR EHRMANN

Appeal 2018-007723
Application 14/510,088
Technology Center 3700

Before DANIEL S. SONG, MICHAEL J. FITZPATRICK, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–19 in this application. The Board has jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies MULTIVAC SEPP HAGGENMÜLLER GMBH & CO. KG as the real party in interest. Appeal Br. 1.

CLAIMED SUBJECT MATTER

Claim 1 illustrates the claimed subject matter on appeal, and it recites:

1. Thermo-forming packaging machine comprising:
 - a controller;
 - a first forming station disposed along a direction of production for forming trays into a base film, wherein the base film is continuous at least between said first forming station and a sealing station downstream of said first forming station;
 - an adjustable second forming station for forming lids into a top film, said adjustable second forming station disposed for movement in a direction of transport of said top film;
 - said sealing station for sealing said trays with said lids;
 - at least one conveyor chain for transporting said base film in said direction of production; and
 - a first detection device provided in or on said sealing station for detecting a position of a marking of said base film and transmitting position information to said controller;
 - wherein said controller controls a length of a film advance step of said conveyor chain during transport of said trays into said sealing station based upon said position of said marking of said base film detected by said first detection device.

Appeal Br. 23 (Claims App.).

REJECTIONS ON APPEAL²

Claims 1–4, 8, 11, and 13–19 are rejected under 35 U.S.C. § 103 as unpatentable over Holzem (US 2012/0036815 A1, pub. Feb. 16, 2012), Natterer (EP 0 569 933 A1, pub. Nov. 18, 1993), Umetsu (US 5,191,693, iss. Mar. 9, 1993), and Ishii (US 7,360,348 B2, iss. Apr. 22, 2008).

² Rejections of claim 19 under 35 U.S.C. § 112(a) for lack of written description, and under § 112(b) for indefiniteness, have been withdrawn. Final Act. (dated Sept. 20, 2017) 3–4 (rejections); Ans. 2 (withdrawal).

Claims 5–7 are rejected under 35 U.S.C. § 103 as unpatentable over Holzem, Natterer, Umetsu, Ishii, and Prena (US 3,762,125, iss. Oct. 2, 1973).

Claim 9 is rejected under 35 U.S.C. § 103 as unpatentable over Holzem, Natterer, Umetsu, Ishii, and Send (US 6,820,399 B2, iss. Nov. 23, 2004).

Claims 10 and 12 are rejected under 35 U.S.C. § 103 as unpatentable over Holzem, Natterer, Umetsu, Ishii, and Bening (US 6,509,072 B2, iss. Jan. 21, 2003).

OPINION

A. *Obviousness over Holzem, Natterer, Umetsu, and Ishii* (Claims 1–4, 8, 11, and 13–19)

1. *Claims 1–4, 8, and 18*

Appellant argues for the patentability of claims 1–4, 8, and 18 as a group, without arguing for any of the claims in this group separately from the other claims. *See* Appeal Br. 8–18, 20–21. We select claim 1 to decide the appeal as to these claims. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

a. *Holzem*

The Examiner finds Holzem discloses a thermo-forming packaging machine (i.e., machine 1) exhibiting several limitations of claim 1. Final Act. 5–6. Appellant does not dispute these findings.

Thus, Holzem's machine 1 comprises first forming station 2 disposed along a direction of production for forming trays 13³ in base film 9, wherein base film 9 is continuous at least between first forming station 2 and sealing station 3 downstream of first forming station 2. Final Act. 5 (citing Holzem, Fig. 1, ¶ 27). Holzem also discloses second forming station 15 for forming lids 14' in top film 14. *Id.* Holzem's sealing station 3 seals trays 13 with lids 14'. *Id.* Holzem also includes at least one conveyor chain 7 for transporting base film 9 in the direction of production. *Id.*

Completing the comparison to claim 1, the Examiner determines Holzem does not disclose: (1) second forming station 15 being "adjustable"; (2) "a controller"; (3) "a first detection device provided in or on" sealing station 3 for detecting markings on base film 9 and transmitting position information to the controller; or (4) "control[ling] a length of a film advance step" for base film 9 with the controller. Final Act. 6, 7.

b. Holzem and Natterer

The Examiner finds Natterer's Figure 7 discloses a packaging machine comprising controller 44, adjustable forming station 4, adjustable sealing station 5, and a detection device (i.e., print mark sensor 40) that detects printed marks on film 43. Final Act. 6 (citing Natterer, Fig. 7, pg. 2 (¶ 2), pg. 4 (¶¶ 1, 3, 4)).⁴ The Examiner finds controller 44 receives

³ Holzem's Figure 1 identifies both the top film and one tray with numeral 14. Holzem's written description (¶ 27) describes top foil 14 and tray 13.

⁴ The record contains two machine translations of Natterer's German disclosure into English, one dated September 23, 2014, and the other dated February 27, 2017. The Examiner cites to the latter, and so we do too.

information from detection device 40 to determine the position of film 43, and accordingly adjusts the respective positions of stations 4 and 5, to place the stations in the desired position relative to the printed marks. *Id.*

The Examiner determines it would have been obvious, in light of these disclosures in Natterer, to modify Holzem's machine 1 to incorporate *adjustable* first forming station 2 and *adjustable* second forming station 15, controlled by a controller using a detection device that detects markings on base film 9. *Id.* This would have been done, in the Examiner's view, to adjust the position of Holzem's top film 14 relative to Holzem's base film 9 to "make up with the printed marks" and make Holzem's machine 1 "more versatile." *Id.*

Appellant disputes the Examiner's foregoing determination of obviousness. Appeal Br. 11–14. Appellant objects that Holzem and Natterer fail to disclose the claimed "adjustable second forming station for forming lids," because Holzem's second forming station 15 is not adjustable, and Natterer has just one adjustable forming station 4 which does not form lids. *Id.* at 11–12. Appellant further asserts it would not have been obvious to make Holzem's vertically oriented second forming station 15 to be adjustable, based on Natterer's horizontally adjustable forming station 4. *Id.* at 12–14. This is so, in Appellant's view, because Natterer's side rail roller configuration for implementing horizontal adjustment would be unable to implement stable vertical adjustment "without substantial modification," requiring "a change in the principle of operation" of Holzem's second forming station 15, without a reasonable expectation of success. *Id.* at 13–14; Reply Br. 3–5.

Upon review of the foregoing, we do not discern error in the Examiner's determination of obviousness over Holzem and Natterer. The test for obviousness is not whether the features of one reference (such as Natterer) may be bodily incorporated into the structure of the other reference (such as Holzem), but rather is "what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *see also In re Merck & Co.*, 800 F.2d 1091 (Fed. Cir. 1986) (nonobviousness is not established by attacking references individually when unpatentability is predicated upon a combination of prior art disclosures). "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

We agree with the Examiner that a person of ordinary skill in the art would have been motivated to modify, and capable of modifying, the support structure of Holzem's vertically oriented second forming station 15 to be vertically adjustable, along the direction of travel of top film 14, so that lids 14' will be properly aligned with trays 13 in sealing station 3 based on markings detected on base film 9. *See* Advisory Act. (dated Dec. 7, 2017) 2 ("[T]he person of ordinary skill in the art would know that [Holzem's] lid forming station would also need to be adjustable in order to ensure the lid aligns with the tray."); Ans. 4-5. Further, this modification to Holzem does not change Holzem's principle of operation, which is to manufacture re-closable packages 8 with trays 13 and lids 14' in continuous films. Holzem, Fig. 1, Abstract, ¶ 2.

c. Holzem, Natterer, and Umetsu

The Examiner finds the combination of Holzem and Natterer does not disclose a controller that “controls a length of a film advance step” of Holzem’s base film 9, as required by claim 1. Final Act. 7. The Examiner cites Umetsu as disclosing such a controller, and determines it would have been obvious to incorporate such a controller in the combined system of Holzem and Natter. *Id.* (citing Umetsu, Figs. 8–9, 9:27–45). Appellant does not challenge this aspect of the rejection, which we therefore sustain. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017) (“any arguments or authorities not included in the appeal brief will be refused consideration by the Board for purposes of the present appeal”).

d. Holzem, Natterer, Umetsu, and Ishii

The Examiner finds the combination of Holzem, Natterer, and Umetsu does not disclose that the first detecting device (i.e., Natterer’s print mark sensor 40) is “provided in or on the sealing station” (i.e., Natterer’s sealer station 5) as claimed. Final Act. 7. The Examiner relies on Ishii to determine that the claimed detection device positioning would have been obvious. *Id.* at 7–8.

Appellant argues Ishii is non-analogous art. Appeal Br. 8–10. Only “analogous” prior art references may be used to support an obviousness determination. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (citing *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992)). A prior art reference is analogous to an application (1) if it is from the same field of endeavor as the inventor’s, regardless of the problem addressed, or (2) if the reference is not within the field of the inventor’s endeavor, it is nonetheless reasonably pertinent to the particular problem with which the inventor is involved. *Id.*

The Examiner determines Ishii is analogous art, because Ishii discloses a method and system for manufacturing and processing “sheet material.” Final Act. 19–20 (citing Ishii, 2:19–23); Ans. 2–3 (further citing Ishii, 2:32–36). It is not entirely clear whether the Examiner’s determination relies on both of the two alternative criteria for Ishii to be analogous art, or only the second “particular problem” criterion. Final Act. 19–20; Ans. 2–3.

Appellant asserts the Examiner mis-applies the second criterion of the analogous art test, which requires Ishii to “be pertinent to the ‘particular problem’ being solved by the inventor — not a problem hypothesized by the Examiner.” Appeal Br. 8–9. Appellant contends the claimed invention “is attempting to particularly solve the problem of uniting a formed tray and a formed lid as precisely as possible in a sealing station of a thermoforming packaging machine,” and “not simply solving the general problem of ‘processing sheet material.’” *Id.* at 9 (citing Spec. ¶ 8); Reply Br. 2. Appellant further contends “Ishii and Appellant do not even process the same type of ‘sheet material,’” because Ishii processes individual sheets of X-ray film, whereas Appellant’s invention processes a continuous film web to make thermo-formed packages. Appeal Br. 9–10 (citing Ishii, 3:10–61, and Appellant’s Fig. 1). Appellant additionally asserts Ishii’s sensors do not detect markings on a film, but rather detect the presence of an individual sheet of film to count sheets. *Id.* at 10 (citing Ishii, 3:10–61).

We determine Ishii is analogous art here, under either one of the two alternative analogous art criteria. Appellant discloses a method of manufacturing thermo-formed packages, whereby package trays are formed in a continuous base film and package lids are formed in a continuous top film, and the two films are brought together to align and seal the trays and

lids to each other, and then cut into individual packages. Spec. ¶¶ 2, 7–10, 16; *id.* at Fig. 1, ¶¶ 38, 40. Ishii discloses a method of manufacturing X-ray film sheets, whereby a continuous film is cut into individual sheets, and the individual sheets are sorted by various gates provided along a conveying apparatus into different trays. Ishii, Abstract, 1:14–20; *id.* at Figs. 1–2, 4:44–54, 6:5–48. Thus, the common field of endeavor is the processing of sheet material, as found by the Examiner.

Further, Appellant addresses the particular problem of aligning the trays in the base film with the lids in the top film to be united “as precisely as possible in a sealing station,” using a detector to track printed markings on the base film, and accordingly adjusting how the base and top films are processed to achieve the desired alignment. Spec. ¶¶ 8–10, 12, 16. Ishii is reasonably pertinent to that problem, because Ishii discloses detectors to track the length and number of individual sheets passing through various sheet processing stations, and accordingly determine whether the sheets have been processed appropriately. Ishii, 1:14–17, 2:32–57, 6:49–54, 8:18–23. The common problem addressed, therefore, is tracking a sheet material during processing in order to ensure that the processing is performed correctly.

Appellant next challenges the Examiner’s determination of obviousness based on Ishii. Appeal Br. 14–18. Here, the Examiner cites Ishii as disclosing a method of controlling the processing of sheet material (i.e., sheets 12), wherein detection devices (i.e., sensors 60A–60I) are disposed at the entrance and exit of each processing operation (i.e., gates 48, 50, 52). Final Act. 7 (citing Ishii, 2:19–41, 2:52–59, 7:42–54). The Examiner finds incorporating such an arrangement into the combined

packaging machine of Holzem, Natterer, and Umetsu would have been “beneficial,” in order to “allow quick determination of the proper conveying and processing of the sheet material,” “mak[ing] the machine more efficient and more reliable.” *Id.* at 7–8. This would have been done, in the Examiner’s view, “by having [Natterer’s] print mark sensor before and after each of [Holzem’s] stations as taught by Ishii,” including Holzem’s sealing station 3. *Id.* at 8, 20. This positioning, in the Examiner’s view, “*would further ensure the position of the trays relative to each station,*” given that the continuous nature of Holzem’s films 9 and 14 “does not guarantee that the spacing between the trays do[es] not change when the film is processe[d] by the stations.” *Id.* at 21 (emphasis added).

Appellant contends “there is no reasonable basis to support” the Examiner’s determination of obviousness, because Ishii’s arrangement of sensors at the inlet and outlet sides of working stations “results from the particular needs for processing *individual sheets* of X-ray film of *finite length,*” whereas the other three references each concern “a thermoforming packaging machine conveying a *continuous* bottom *film.*” Appeal Br. 14–16 (emphases added) (citing Ishii, 3:10–61). Appellant argues the Examiner’s obviousness rationale for bridging this gap is “conclusory and . . . without supporting evidence,” and also based on hindsight. *Id.* at 16, 20–21. According to Appellant, modifying a *continuous* film thermoforming packaging machine (such as disclosed by Holzem, Natterer, and Umetsu) by “placing a sensor at the entrance and exit of each workstation to attempt to (1) *determine the presence* of the film, (2) *count* the number of films that pass through the station, or (3) *measure the length* of the film” (as disclosed by Ishii), “would provide no functional benefit.” *Id.* at 16–17 (emphases

added); Reply Br. 3–7. Appellant additionally contends Ishii does not disclose a sealing station; detecting a marking on a film; aligning a tray with a lid; or adjusting a length of a film advance step. Appeal Br. 17.

We conclude the Examiner has articulated a rational basis for the proposed obviousness of modifying Holzem by placing a print mark detector (from Natterer) before and after (from Ishii) Holzem’s sealing station 3, thereby resulting in a detector “in or on” sealing station 3 as recited in claim 1. In particular, a person of ordinary skill in the art would have appreciated this positioning would help to ensure a proper alignment between trays 13 and lids 14’ within sealing station 3, by tracking the position of print marks on base film 9 that forms trays 13. *See* Final Act. 21. As is apparent from Figure 1 of Holzem, it is important for top film 14 and bottom film 9 to be aligned within sealing station 3 so that lids 14’ are aligned with trays 13, and packages 8 will thereby be formed properly by sealing the two films together. Holzem, Fig. 1, ¶¶ 8–10, 27. Placing Natterer’s print mark sensors in or on Holzem’s sealing station 3, as suggested by Ishii’s placement of sensors 60A–60I with respect to various film processing gates 48, 50, and 52, would help achieve such alignment by tracking the placement of bottom film 9 proximate to sealing station 3 where the two films come together.

Thus, it is the combination of prior art references that rationally leads to obviousness here, without hindsight. *See Keller, supra; Merck, supra.* Appellant is correct that Ishii does not disclose a sealing station, or detecting a marking on a film, or aligning a tray with a lid, or adjusting a length of a film advance step. However, these steps are disclosed by the other prior art references, as discussed above, Ishii being relied upon to establish that use

of detection devices disposed at the entrance and exit of each processing operation is known. Appellant's objections are not persuasive, because they ignore the creativity that a person of ordinary skill in the art would bring to bear in considering the combined disclosures of Holzem, Natterer, Umetsu, and Ishii as a whole.

Appellant finally contends that the cited prior art references, even if combined, do not lead to a detection device provided "in or on" a sealing station, as claimed. Appeal Br. 17–18. According to Appellant, Ishii's detection devices are "disposed at entrance and exit sides of each of the processing operations" (quoting Ishii, 2:32–38), so Ishii "requires" the detection devices to "be *outside* the workstation to ensure [they] can detect the film pieces entering the workstation also exit the workstation." Appeal Br. 17–18 (emphasis added).

The Examiner answers that: "The entrance and exit side of the stations [in Ishii] are interpreted as part of said stations and . . . disposing a detector at the entrance and exit side of the stations is interpreted as disposing a detector on said station." Ans. 8–9 (citing Ishii, 2:19–22, 2:32–36).

We conclude the Examiner does not err in determining that the combined disclosures of Holzem, Natterer, Umetsu, and Ishii lead to placing the detection device in or on Holzem's sealing station 3. As stated above, a person of ordinary skill in the art would have appreciated this placement would help achieve alignment between Holzem's lids 14' and trays 13 to form packages 8, by tracking the orientation of bottom film 9 proximate to sealing station 3 where Holzem's two films come together. The fact that Ishii's processing stations are gates for directing sheet materials to different trays along a conveying apparatus, in which the detectors are "disposed at"

the entrance and exit sides of each gate (Ishii, 2:32–38, 6:5–48), does not alter such obviousness based on the combined prior art disclosures as a whole. *See also In re Japikse*, 181 F.2d 1019, 1023 (CCPA 1950) (claims held unpatentable because shifting the position of the starting switch would not have modified the operation of the device); *In re Kuhle*, 526 F.2d 553, 555 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice).

e. Conclusion Regarding Claims 1–4, 8, and 18

For the foregoing reasons, we sustain the rejection of claims 1–4, 8, and 18 as having been obvious over Holzem, Natterer, Umetsu, and Ishii.

2. Claims 11 and 13–15

In urging for the patentability of independent claim 11 and its dependent claims 13–15 over Holzem, Natterer, Umetsu, and Ishii, Appellant relies solely on arguments already considered above in connection with claim 1. *See* Appeal Br. 8–18, 20–21. For the reasons provided above, we sustain the rejection of claims 11 and 13–15 as having been obvious over Holzem, Natterer, Umetsu, and Ishii.

3. Claim 16

Claim 16 recites a method for operating a thermo-forming packaging machine, wherein the machine has similar components to those recited in claim 1 discussed above, and additionally has “a second detection device.” Appeal Br. 26 (Claims App.); *id.* at 25 (parent claims 11 and 14). Claim 16 recites that the method includes “positioning said second forming station along a direction of transport of said top film by said controller in

dependence of the detected position of said marking of said base film by said second detection device.” *Id.* at 26.

Concerning the second detection device, the Examiner cites a print mark detector being placed after Holzem’s first forming station 2, based on the combination of Holzem, Natterer, and Ishii, substantially as already discussed above in connection with claim 1. *See* Final Act. 8 & 20 (obvious to have “a print mark sensor before and after each of the stations” in Holzem), 10–11 (claim 11), 12 (claim 14), 13 (claim 16). The Examiner concludes it would have been obvious to use this second detector (which detects print marks on Holzem’s base film 9) to control the position of Holzem’s second forming station 15 (which forms lids 14’ in top film 14). *Id.* at 13; Ans. 9–10.

Appellant’s opposition rests largely on arguments we have already considered and rejected above, and additionally asserts that “none of the reference[s] teach or suggest moving a workstation for [a top] film based upon the measurement of markings on a [bottom] film,” as recited in claim 16. Appeal Br. 18–19; Reply Br. 7–8.

Upon review of the foregoing, we do not discern error in the Examiner’s rejection of claim 16. As discussed at length above in connection with claim 1, the underlying basis for obviousness here is to ensure proper alignment between Holzem’s top film 14 and base film 9 within sealing station 3, so that lids 14’ are aligned with trays 13 to form packages 8. Holzem, Fig. 1. In that context, it makes sense to adjust how lids 14’ are formed in top film 14 by re-positioning second forming station 15 based on the detected position of base film 9, to achieve the

desired alignment. Therefore, we sustain the rejection of claim 16 as having been obvious over Holzem, Natterer, Umetsu, and Ishii.

4. *Claim 17*

Claim 17 depends from claim 1, and adds “a cutting station disposed downstream of said sealing station, said cutting station for separating one or more individual packages from said base film.” Appeal Br. 26 (Claims App.).

The Examiner cites Holzem as disclosing cutting stations 5 and 6 downstream of sealing station 3, for separating individual packages 8 from base film 9. Final Act. 13–14, 22 (citing Holzem, Fig. 1, ¶ 27).

Appellant objects that “Ishii teaches that all of its sensors are disposed *after* the X-ray film sections are cut from the roll,” so “[t]he teachings of Ishii are incompatible with” the arrangement recited in claim 17, which requires detection devices disposed *upstream* of the cutting station. Appeal Br. 19 (emphases added).

Appellant’s rebuttal is not persuasive. As discussed at length above, the combination of Holzem, Natterer, Umetsu, and Ishii leads to a detection device being disposed in or on Holzem’s sealing station 3, as recited in claim 1. Appellant does not cite, and we do not discern, any disclosure in Ishii that is incompatible with maintaining Holzem’s placement of cutting stations 5 and 6 downstream of sealing station 3. It is true that Ishii’s first processing step is to cut film taken off roll 26 into individual sheets at cutting station 20A. *See* Ishii, Fig. 2, 4:58–64. However, this does not teach away from other cutting station configurations, such as Holzem’s cutting station configuration. Therefore, we sustain the rejection of claim 17 as having been obvious over Holzem, Natterer, Umetsu, and Ishii.

5. *Claim 19*

Claim 19 depends from claim 1, and adds “said marking is associated with one or more trays disposed in the sealing station,” and “locat[ing] said one or more trays in an exact target position in the sealing station.” Appeal Br. 26 (Claims App.).⁵

The Examiner’s rejection of claim 19 is substantially the same as the rejection of claim 1, discussed above. *See* Final Act. 14–15, 22–24.

Appellant objects that “Holzem, Natterer and Ishii alone or in combination fail to teach or suggest the thermo-forming packaging machine of claim 1 that also includes” the limitations of claim 19, which Appellant simply quotes without further explanation. Appeal Br. 19–20; Reply Br. 8 (same, but underlining selected portions of claim 19).

Appellant’s argument does no more than “merely point[] out what a claim recites,” which under our Rules “will not be considered an argument for separate patentability of the claim.” 37 C.F.R. § 41.37(c)(1)(iv) (2017). For example, Appellant does not persuasively explain how the combination of prior art references, as discussed in detail above, might not lead to the subject matter added by claim 19 to claim 1. Therefore, for the reasons provided above in connection with claim 1, we sustain the rejection of claim 19 as having been obvious over Holzem, Natterer, Umetsu, and Ishii.

⁵ Claim 19 as reproduced in the Appeal Brief Claims Appendix does not accurately reflect the claim, as most recently amended in an after-final amendment entered by the Examiner. *See* Amendment (dated Nov. 18, 2017) 7; Advisory Act. (entering Amendment).

*B. Obviousness over Holzem, Natterer, Umetsu, Ishii, and
Either Prena, Send, or Bening
(Claims 5–7, 9, 10, and 12)*

In urging for the patentability of dependent claims 5–7, 9, 10, and 12, Appellant relies solely on arguments already considered above in connection with independent claims 1 and 11. *See* Appeal Br. 20. For the reasons provided above, we sustain the various rejections of claims 5–7, 9, 10, and 12 as having been obvious over Holzem, Natterer, Umetsu, Ishii, and either Prena, Send, or Bening.

CONCLUSION

In summary:

| Claim(s) Rejected | 35 U.S.C. § | References | Affirmed | Reversed |
|------------------------------|------------------------|--|----------------------|-----------------|
| 1–4, 8, 11, 13–19 | 103 | Holzem, Natterer, Umetsu, Ishii | 1–4, 8, 11, 13–19 | |
| 5–7 | 103 | Holzem, Natterer, Umetsu, Ishii, Prena | 5–7 | |
| 9 | 103 | Holzem, Natterer, Umetsu, Ishii, Send | 9 | |
| 10, 12 | 103 | Holzem, Natterer, Umetsu, Ishii, Bening | 10, 12 | |
| Overall Outcome | | | 1–19 | |

TIME PERIOD FOR RESPONSE

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

AFFIRMED