

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTUITIVE SURGICAL, INC.,  
Petitioner,

v.

ETHICON LLC,  
Patent Owner.

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IPR2019-00880  
Patent 7,490,749 B2

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Before JOSIAH C. COCKS, BENJAMIN D. M. WOOD, and  
MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

JUDGMENT  
Final Written Decision  
Determining All Challenged Claims Unpatentable  
Dismissing Petitioner's Motion to Exclude  
*35 U.S.C. § 318(a)*

## I. INTRODUCTION

### A. *Background and Summary*

Intuitive Surgical, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1 and 3 of U.S. Patent No. 7,490,749 B2 (Ex. 1001, “the ’749 patent”). Ethicon LLC (“Patent Owner”) did not file a Preliminary Response. We instituted an *inter partes* review on all claims and all grounds asserted in the Petition. *See* Paper 7 (“Dec. on Inst.”).

After institution of trial, Patent Owner filed a Patent Owner Response. Paper 15 (“PO Resp.”).<sup>1</sup> Petitioner filed a Reply. Paper 27 (“Pet. Reply”).<sup>2</sup> Patent Owner filed a Sur-Reply. Paper 32 (“Sur-Reply”).<sup>3</sup> Petitioner filed a Motion to Exclude (Paper 36<sup>4</sup>), to which Patent Owner filed an Opposition (Paper 39<sup>5</sup>), and to which Petitioner filed a Reply (Paper 42<sup>6</sup>).

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<sup>1</sup> A confidential, unredacted version of the Patent Owner Response was filed as Paper 16.

<sup>2</sup> A confidential, unredacted version of the Petitioner’s Reply was filed as Paper 26.

<sup>3</sup> A confidential, unredacted version of the Patent Owner’s Sur-Reply was filed as Paper 31.

<sup>4</sup> A confidential, unredacted version of the Petitioner’s Motion to Exclude was filed as Paper 35.

<sup>5</sup> A confidential, unredacted version of the Patent Owner’s Opposition was filed as Paper 38.

<sup>6</sup> A confidential, unredacted version of the Petitioner’s Reply was filed as Paper 41.

Both parties also seek to have portions of the record maintained under seal. Papers 17, 25, 34, 37, 40. Those Motions to Seal will be decided in due course via a separate Order or Orders.

A hearing was held on July 9, 2020, and a transcript of the hearing is included in the record. *See* Paper 44 (“Tr.”).

We have authority under 35 U.S.C. § 6. Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that claims 1 and 3 of the ’749 patent are unpatentable.

*B. Real Parties in Interest*

Petitioner identifies itself as the only real party in interest. Pet. 1. Patent Owner identifies itself as a real party in interest. Paper 5, 2. Patent Owner indicates that it is “an indirect subsidiary of Johnson & Johnson.” *Id.*

*C. Related Matters*

The parties state that the ’749 patent is the subject of Civil Action No. 1:18-cv-01325 filed August 27, 2018 in the U.S. District Court for the District of Delaware. Pet. 1; Paper 5, 2. Petitioner also states that it has filed other petitions for *inter partes* review of patents owned by Patent Owner and asserted against Petitioner in the District of Delaware. *Id.*

*D. The '749 Patent*

The '749 patent issued February 17, 2009 from an application filed March 28, 2007, and is titled "SURGICAL STAPLING AND CUTTING INSTRUMENT WITH MANUALLY RETRACTABLE FIRING MEMBER." Ex. 1001, codes (45), (22), (54). The '749 patent describes a surgical stapler that applies lines of staples to tissue and cuts the tissue between the staple lines, and that has manual retraction capabilities. *Id.* at 1:17–24. Figure 1, reproduced below, depicts a surgical stapler according to the '749 patent:

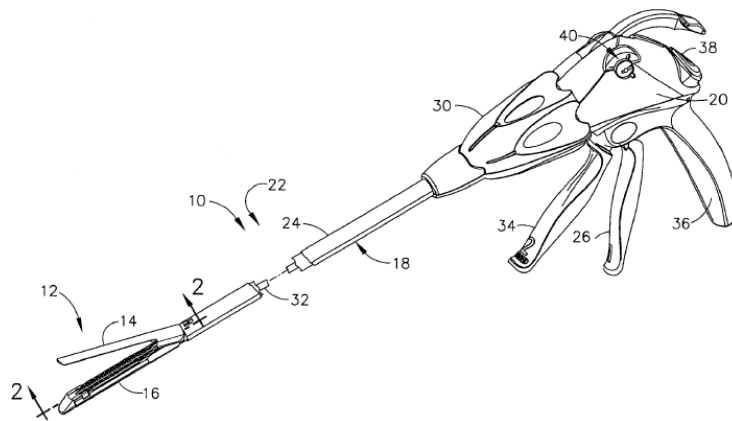


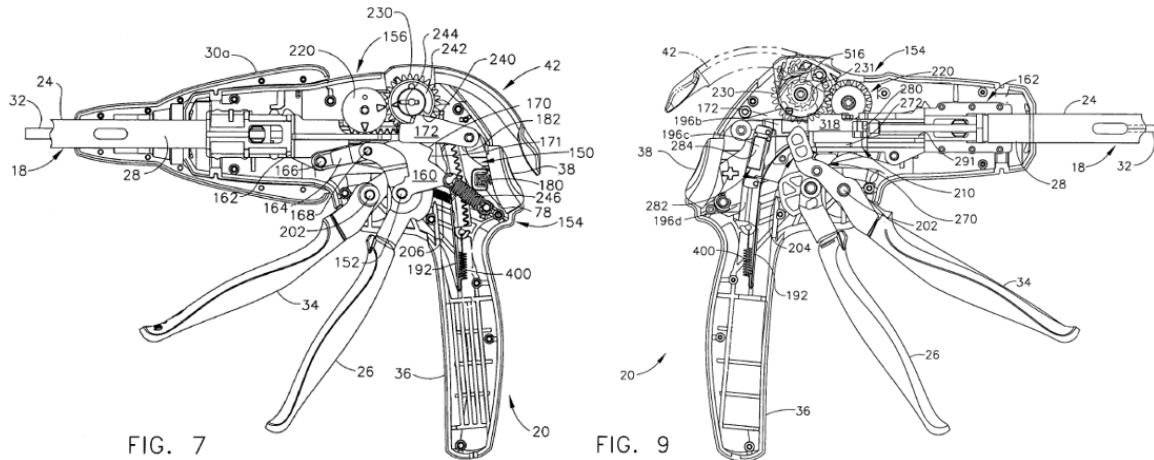
FIG. 1

Figure 1, reproduced above, depicts surgical stapling and severing instrument 10 comprising end effector 12 coupled to elongate shaft assembly 18, which in turn is coupled to handle 20. *Id.* at 5:36–43. End effector 12 comprises anvil 14 pivotally attached to elongate channel 16 to form opposing jaws for clamping tissue. *Id.* at 5:39–41. Closure tube 24 of shaft assembly 18 is coupled between closure trigger 26 and anvil 14. *Id.* at 5:60–

61. Firing rod 32<sup>7</sup> is positioned for longitudinal movement and coupled between anvil 14 and multiple-stroke firing trigger 34. *Id.* at 6:6–9.

In an endoscopic operation, a surgeon first inserts end effector 12 and shaft assembly 18 in the surgical site and positions the end effector around the tissue to be stapled and severed. The surgeon then depresses closure trigger 26 fully toward pistol grip 36 to move closure tube 24 distally to push anvil 14 pivotally toward elongate channel 16, thereby clamping the tissue between the anvil and elongate channel. *Id.* at 6:19–22, 7:20–23.

The surgeon then fires the instrument. *Id.* at 6:26–30. Figures 7 and 9, reproduced below, depict portions of the instrument's firing mechanism:

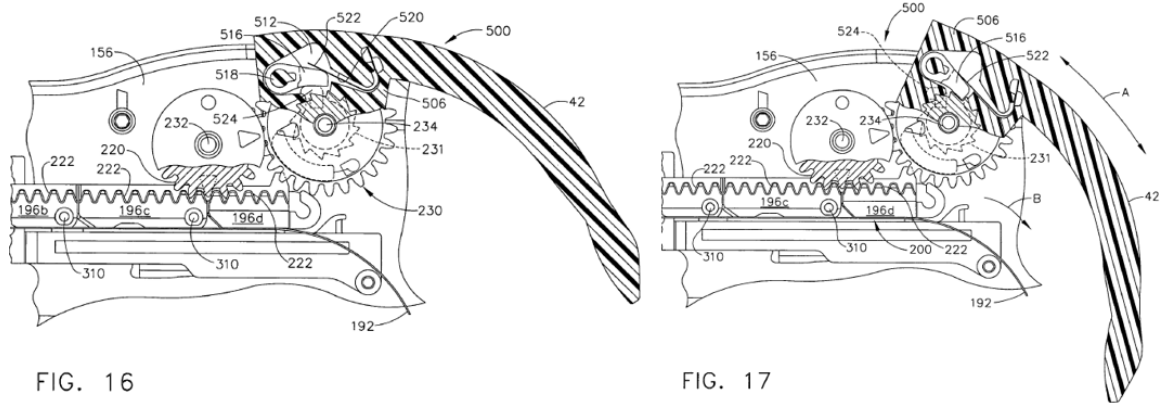


Figures 7 and 9, reproduced above, provide left and right views, respectively, of portions of linked transmission firing drive 150. Upper portion 204 of firing trigger 34 engages each of links 196a-d of linked rack 200 (shown more clearly in Figures 8 and 10) during each firing stroke depression, incrementally advancing linked rack 200 distally. *Id.* at 10:19–43. Because firing rod 32 is attached to linked rack 200, it also advances

<sup>7</sup> The '749 patent also refers to this structure as “firing bar 32.” *See, e.g.,* Ex. 1001, 12:11, 56–57.

distally, causing a wedge-shaped sled and cutting blade to simultaneously staple and cut the tissue. *Id.* at 6:26–35, 7:24–8:18.

Instrument 10 also comprises a manual retraction system that allows the surgeon to retract firing rod 32 after the firing operation. The manual retraction system is depicted in Figures 16 and 17, reproduced below:



FIGS. 16 and 17, reproduced above, depict retraction assembly 500. *Id.* at 12:9–10. First gear 220 meshes with toothed upper surface 222 of linked rack 200. *Id.* at 12:16–18. First gear 220 also engages second gear 230, which is attached to smaller right-side ratchet gear 231. Ratchet gear 231 fits into handle 42 and engages with pawl 516, which is fitted into upper recess 512 of the handle. *Id.* at 12:37–45.

After the firing sequence has been completed, the surgeon can retract firing rod 32 by sequentially depressing and releasing manual retraction lever 42. *Id.* at 12:55–59. When handle 42 is depressed, pawl 516 drives ratchet gear 231, and thus second gear 230, clockwise when viewed from the left. *Id.* at 12:59–64. This drives first gear 220 counterclockwise, which moves linked rack 200 and firing rod 32 longitudinally in the proximal direction until it is fully retracted. *Id.* at 12:64–13:6. Retraction assembly 500 generates a “sole” retraction motion because it is “configured to enable the surgeon to manually retract the firing bar 32 without any other assistance

from springs or other retraction arrangements that serve to place a drag on the firing system and which ultimately require the generation of higher firing forces to actuate the firing mechanism.” *Id.* at 12:9–15, 16:23–28.

*E. Illustrative Claim*

Petitioner challenges claims 1 and 3 of the ’749 patent. Claim 1 is independent and claim 3 depends from claim 1. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. A surgical instrument, comprising:
  - a handle assembly;
  - an end effector for performing a surgical operation, said end effector operably coupled to said handle assembly and operably supporting a firing member that is movable from a retracted position to a fired position in response to a longitudinal firing motion applied thereto;
  - a firing drive supported by said handle assembly and configured to selectively generate said longitudinal firing motion upon actuation of a firing trigger operably coupled to said handle assembly; and
  - a retraction assembly supported by said handle assembly and interfacing with said firing drive such that manual actuation of said retraction assembly causes said firing drive to generate a sole retraction motion which is communicated to said firing member to cause said firing member to move from said fired position to said retracted position.

Ex. 1001, 17:27–44.

*F. Prior Art References and Testimonial Evidence*

Petitioner relies on the following references for its challenges:

| <b>Name</b> | <b>Description</b>                        | <b>Date</b>   | <b>Exhibit</b> |
|-------------|---|---------------|----------------|
| Shelton II  | U.S. Patent App. Pub. No. 2006/0175375 A1 | Aug. 10, 2006 | 1004           |
| Swayze      | U.S. Patent App. Pub. No. 2005/0178813 A1 | Aug. 18, 2005 | 1005           |

| Name      | Description                  | Date            | Exhibit |
|-----------|------------------------------|-----------------|---------|
| Shelton I | U.S. Patent No. 8,322,455 B2 | Dec. 4,<br>2012 | 1006    |

The parties have also provided witness testimony. The table below lists the witnesses, their roles in this proceeding, and the exhibits in which their testimony is presented:

| Witness                | Role                                       | Exhibits   |
|------------------------|--|--|
| Dr. Bryan Knodel       | Petitioner's technical expert <sup>8</sup> | Ex. 1003 (declaration of Mar. 25, 2019)<br>Ex. 2018 (transcript of deposition of Dec. 13, 2019)<br>Ex. 1029 (supplemental declaration of Apr. 16, 2020)<br>Ex. 2020 (transcript of deposition of May 14, 2020) |
| Mr. Christopher Schall | Patent Owner's fact witness <sup>9</sup>   | Ex. 2008 (declaration of Jan. 10, 2020)  |
| Mr. Chad Boudreaux     | Patent Owner's fact witness <sup>10</sup>  | Ex. 2009 (declaration of Jan. 14, 2020)  |

<sup>8</sup> See Ex. 1003 ¶ 1 (“I have been engaged as an expert . . . on behalf of Intuitive Surgical, Inc. . . .”).

<sup>9</sup> See, e.g., Ex. 2008 ¶ 1 (“I am currently employed by and being compensated by Ethicon Endo-Surgery Inc. (an affiliate of Patent Owner).”); *id.* ¶ 2 (“I am currently a Research and Development Project Director at Ethicon. . . .”).

<sup>10</sup> See, e.g., Ex. 2009 ¶ 1 (“I am currently employed by and being compensated by Ethicon Endo-Surgery Inc. (an affiliate of Patent Owner).”); *id.* ¶ 2 (“I am currently a Staff Design Engineer at Ethicon.”).



| Witness            | Role  | Exhibits   |
|--------------------|---|--|
| Mr. Dean Garner    | Patent Owner’s fact witness <sup>11</sup>     | Ex. 2012 (declaration of Jan. 13, 2020)  |
| Mr. Geoffrey Hueil | Patent Owner’s fact witness <sup>12</sup>     | Ex. 2017 (declaration of Jan. 9, 2020)   |
| Dr. Shorya Awtar.  | Patent Owner’s technical expert <sup>13</sup> | Ex. 2019 (declaration of Jan. 13, 2020) <sup>14</sup><br>Ex. 1015 (transcript of deposition of Apr. 7, 2020) |

*G. Instituted Grounds of Unpatentability*

Petitioner asserts that claims 1 and 3 are unpatentable on the following grounds:<sup>15</sup>

| Claim(s) Challenged | 35 U.S.C. §           | Reference(s)/Basis |
|---------------------|-----------------------|--------------------|
| 1, 3                | 102/103 <sup>16</sup> | Shelton II         |

<sup>11</sup> See, e.g., Ex. 2012 ¶ 1 (“I am currently employed by and being compensated by Johnson & Johnson Services, Inc. (an affiliate of Patent Owner).”); *id.* ¶ 2 (“I am currently the Assistant General Counsel – Patents at Johnson & Johnson.”).

<sup>12</sup> See, e.g., Ex. 2017 ¶ 1 (“I am currently employed by and being compensated by Ethicon Endo-Surgery Inc. (an affiliate of Patent Owner).”); *id.* ¶ 2 (“I am currently an Engineering Fellow at Ethicon.”).

<sup>13</sup> See Ex. 2019 ¶ 1 (“I have been retained by . . . Patent Owner Ethicon LLC (‘Ethicon’) . . . to . . . prepare expert declarations.”).

<sup>14</sup> A public, redacted version of Dr. Awtar’s declaration was also filed as Exhibit 2019.

<sup>15</sup> Because the ’749 patent issued from an application that claims priority to a date before the effective dates of the amendments to the Patent Statute enacted by the Leahy-Smith America Invents Act (AIA), we apply the pre-AIA version of the statute. See Leahy-Smith America Invents Act (AIA), Pub. L. No. 112–29, §§ 3(n)(1), 4(e), 125 Stat. 284, 293, 297 (2011).

<sup>16</sup> Patent Owner asserts that Shelton II is only prior art under 35 U.S.C. § 102(e), and as such, it “is not available for obviousness pursuant to 35 U.S.C. § 103(c)(1).” PO Resp. 4, 64. We need not resolve this issue

| Claim(s) Challenged | 35 U.S.C. §       | Reference(s)/Basis   |
|---------------------|-------------------|----------------------|
| 1, 3                | 102/103           | Swayze <sup>17</sup> |
| 1, 3                | 102 <sup>18</sup> | Shelton I            |

See Pet. 3.

## II. LEVEL OF ORDINARY SKILL IN THE ART

In our Decision on Institution, we adopted Petitioner’s proposal that an ordinarily skilled artisan at the time of the invention of the ’749 patent “would have had the equivalent of a Bachelor’s degree or higher in mechanical engineering, or a related field directed towards medical mechanical systems, and at least 3 years working experience in research and development for surgical instruments.” Dec. on Inst. 7 (quoting Pet. 23).

Patent Owner has not proposed a definition of a person of ordinary skill in the art, but instead “adopts and applies” Petitioner’s definition. PO Resp. 25 (citing Ex. 2019 ¶ 6).

Accordingly, we adopt Petitioner’s definition, which is consistent with the level of skill reflected in the ’749 patent and the prior art. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art, itself, can reflect appropriate level of ordinary skill in art).

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because, as discussed *infra*, we find that Shelton II anticipates the challenged claims.

<sup>17</sup> According to Patent Owner, “Swayze discloses an identical surgical instrument as Shelton II.” PO Resp. 5.

<sup>18</sup> Patent Owner asserts that Shelton I does not qualify as prior art because “Shelton I was filed June 27, 2006 ([Ex.] 1006 at 1), while the named inventors of the 749 Patent reduced to practice the claimed invention by the end of May 2006.” PO Resp. 5, 81. We need not resolve whether Shelton I qualifies as prior art because, as discussed *infra*, we find that Shelton II anticipates the challenged claims.

### III. CLAIM CONSTRUCTION

We construe the claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b) (2018); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005). Any special definitions for claim terms must be set forth in the Specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioner asserts that claim terms “should generally be given their plain and ordinary meaning consistent with the ’749 Patent’s [S]pecification.” Pet. 15. Petitioner proposes construction for the term “sole retraction motion,” and further asserts that four claim terms require construction under 35 U.S.C. § 112, paragraph 6<sup>19</sup>: “firing member,” “retraction assembly,” “firing drive,” and “closure drive.” *Id.* at 15–24. Patent Owner disagrees with Petitioner’s proposed constructions and proposes its own constructions for each of the terms. PO Resp. 15–24.<sup>20</sup>

In our Decision on Institution, “we determine[d] that no express construction [was] required for any claim term.” Dec. on Inst. 8–9 (citing

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<sup>19</sup> Because the ’749 patent issued from an application that claims priority to a date before the effective dates of the amendments to the Patent Statute enacted by the Leahy-Smith America Invents Act (AIA), we apply the pre-AIA version of the statute. *See Leahy-Smith America Invents Act (AIA)*, Pub. L. No. 112–29, §§ 3(n)(1), 4(e), 125 Stat. 284, 293, 297 (2011).

<sup>20</sup> In its Sur-Reply, Patent Owner “agrees that ‘retraction assembly’ should be construed under § 112(6),” but argues that “Petitioner’s proposed structure is overly narrow.” PO Sur-Reply 3.

*Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). On the full record now before us, we also determine it is not necessary to construe any claim term expressly to resolve the parties' dispute. *See id.* ("only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy"); *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (applying *Vivid Techs.* in the context of an *inter partes* review).

#### IV. GROUNDS OF UNPATENTABILITY

##### A. Ground 1: Claims 1 and 3 – Anticipated by Shelton II

Petitioner asserts that claims 1 and 3 are anticipated by Shelton II. Pet. 24–50 (citing Exs. 1001, 1003, 1004).

##### 1. Overview of Shelton II

Shelton II describes a surgical stapling and cutting instrument that may be equipped with a manual retraction mechanism. Ex. 1004 ¶¶ 2, 14. Figure 31 is reproduced below:

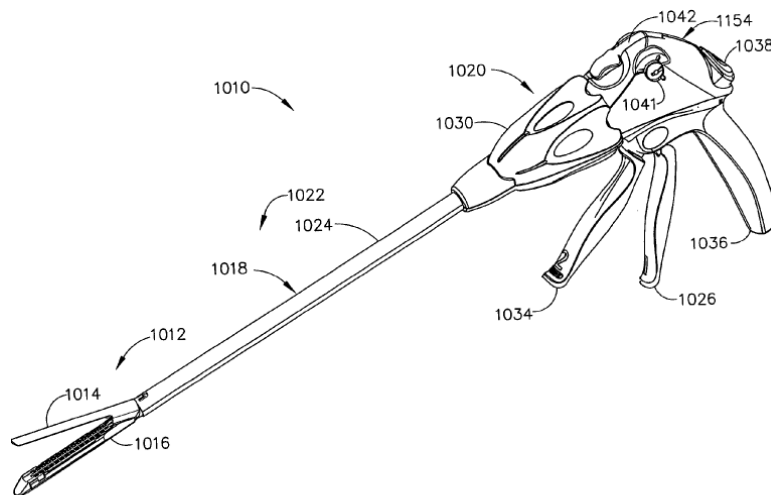
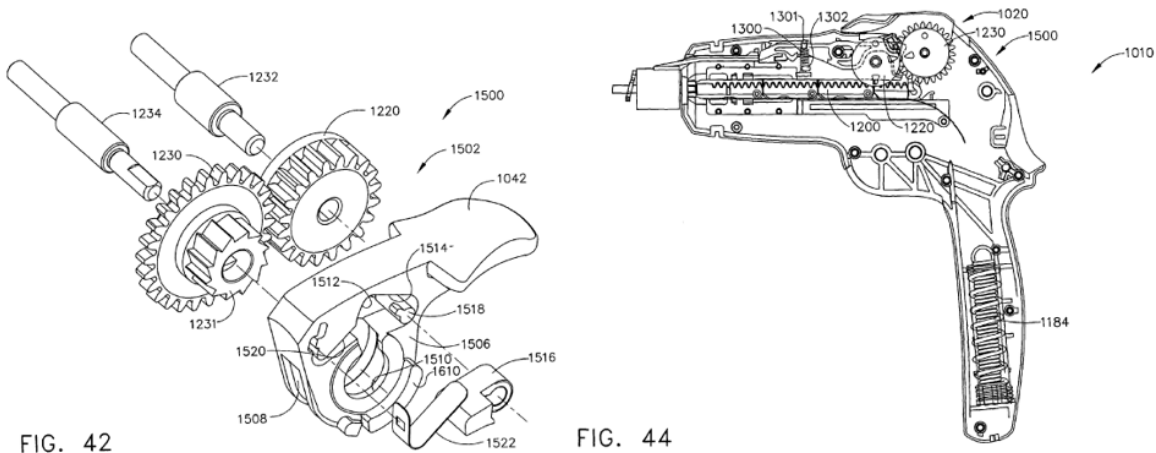


FIG. 31

Figure 31, reproduced above, depicts surgical stapling and severing instrument 1010 comprising staple applying apparatus 1012 coupled to

elongate shaft 1018, which in turn is attached to handle 1020. *Id.* ¶ 125. Staple applying apparatus 1012 comprises anvil 1014 pivotally attached to elongate (staple) channel 1016. *Id.* Closure tube 1024 is coupled between closure trigger 1026 and anvil 1014. *Id.* ¶ 1027. Closure trigger 1026 may be depressed against pistol grip 1036 to move closure tube 1024 distally to push anvil 1014 pivotally toward elongate channel 1016. *Id.* ¶¶ 1026–1027. Multiple stroke firing trigger 1034 can then be depressed against the pistol grip, which moves linked rack 1200 distally to transfer a firing force to the staple applying apparatus via firing rod 1032. *Id.* ¶¶ 130, 132, Figs. 33–37.

Figure 31 also depicts manual firing release lever 1042, which is part of a manual retraction mechanism. Figures 42 and 44, reproduced below, depict this mechanism:



Figures 42 and 44, reproduced above, depict manual retraction mechanism 1500. *Id.* ¶ 142. Front idler gear 1220 engages a toothed upper, left surface 1222 of linked rack 1200 (shown in Figure 33). *Id.* Front idler gear 1220 also engages aft transmission gear 1230 having a smaller right-side ratchet gear 1231. *Id.* The smaller right-side ratchet gear 1231 extends into hub 1506 of manual retraction lever 1024. *Id.* ¶ 143. Locking pawl 1516, located in upper recess 1512, is urged downward into engagement

with ratchet gear 1231 by L-shaped spring tab 1522. *Id.*; *see also id.*, Fig. 43. As manual retraction lever 1042 is sequentially raised and lowered, locking pawl 1516 rotates clockwise and engages ratcheting gear 1231, rotating aft transmission gear 1230 clockwise. *Id.* ¶ 144. This causes forward idler gear 1220 to rotate counterclockwise, which retracts linked rack 1200. *Id.* Combination tension/compression spring 1184 also provides a retraction force. *Id.* ¶ 133. Manual retraction mechanism may operate without the assistance of a retraction spring, however. *Id.* ¶¶ 144, 154.

## 2. Principles of Law

### a) Anticipation

A prior art reference can only anticipate a claim if it discloses all the claimed limitations “arranged or combined in the same way as in the claim.” *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1361 (Fed. Cir. 2012) (quoting *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008)). “However, a reference can anticipate a claim even if it ‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination.” *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (quoting *In re Petering*, 301 F.2d 676, 681 (CCPA 1962)); *see also Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1343 (Fed. Cir. 2016) (distinguishing *Net MoneyIN* when the reference in question explicitly contemplated the combination of the disclosed functionalities).

### 3. Petitioner’s Contentions

In support of its contention that Shelton II anticipates claims 1 and 3 of the ’749 patent, Petitioner discusses the teachings of Shelton II. *See* Pet. 24–50. Petitioner provides a detailed assessment of the content of the prior

art in advocating that all the features of claims 1 and 3 are shown therein.

*Id.* Petitioner also supports that assessment with citation to the Declaration testimony of Dr. Knodel. Ex. 1003.

For example, with respect to claim 1, Petitioner asserts that Shelton II discloses: (1) a handle assembly (Pet. 27–28 (citing Ex. 1004 ¶¶ 125–126, Figs. 31–37; Ex. 1003 ¶ 91)); (2) an end effector (Pet. 28–29 (citing Ex. 1004 ¶¶ 76–82, 125–126, Figs. 2–6, 31–33; Ex. 1003 ¶¶ 92–94)); (3) the end effector supporting a firing member (Pet. 29–31 (citing Ex. 1004 ¶¶ 77–80, Figs. 2, 5, 6; Ex. 1003 ¶¶ 95–98)); (4) a firing drive (Pet. 31–35 (citing Ex. 1004 ¶¶ 126, 128, 130–132, 138–142, Figs. 31–37, 39, 40; Ex. 1003 ¶¶ 99–104)); and (5) a manual retraction assembly that causes the firing drive to “generate a sole retraction motion” (Pet. 35–44 (citing Ex. 1004 ¶¶ 142–144, 154, Figs. 33, 35, 40, 42–45; Ex. 1003 ¶¶ 105–112)). Petitioner similarly shows where it believes the subject matter of claim 3 resides in Shelton II. Pet. 44–50 (citing Ex. 1003 ¶¶ 113–122; Ex. 1004 ¶¶ 76–78, 84, 125–129, Figs. 2, 4, 6–8, 31–35).

#### *4. Patent Owner’s Contentions*

Patent Owner contends that Petitioner’s anticipation ground of unpatentability based on Shelton II is deficient. PO Resp. 3–4, 47–63; PO Sur-Reply 1–2, 6–14. Initially, Patent Owner asserts that Shelton II cannot anticipate the challenged claims because every embodiment in Shelton II includes a retraction system that incorporates “a spring or other force generating member that acts to place a drag on the firing drive.” PO Resp. 3, 48–52. Patent Owner further argues that Petitioner’s theory that one of ordinary skill in the art “would have immediately envisioned removing Shelton II’s retraction spring” is incorrect because

it would significantly alter how the user operates the device. Moreover, removing Shelton II's retraction spring would cause the firing drive to bind during retraction in certain conditions, thus preventing full retraction of the firing member. Finally, such a modification would have defied the conventional wisdom in the art, which was to include a spring to retract the firing member.

PO Resp. 4, 47–52, 56–63; PO Sur-Reply 6–11.

5. *Discussion*

We have reviewed the Petition, Patent Owner Response, Petitioner Reply, Patent Owner Sur-Reply, as well as the relevant evidence discussed in those papers and other record papers, and as discussed in greater detail below, we determine that Petitioner has made the requisite showing regarding claims 1 and 3.

Patent Owner argues that Shelton II does not anticipate independent claim 1 because a person of ordinary skill “would not immediately envision removing the retraction spring from Shelton II.” PO Sur-Reply 1; *see also id.* at 6–9 (citing Ex. 1004 ¶¶ 7, 9, 66, 107, 149–154; Ex. 2019C ¶ 92; Ex. 2020, 40:14–41:17, 40:9–10). According to Patent Owner, paragraph 154 of Shelton II does not describe removing Shelton II's retraction spring (PO Sur-Reply 6 (citing Ex. 1004 ¶ 154)), but instead, “states only that the manual retraction mechanism can be used without assistance of the spring.” *Id.* at 7. We are not persuaded by Patent Owner's argument.

Instead, we agree with Petitioner that “Shelton II invites removal of the retraction spring from the surgical instrument of its illustrated embodiments” (Pet. Reply 1–2 (citing Pet. 37; Ex. 1003 ¶¶ 57–52; Ex. 1004 ¶ 154)), and as such, “a POSITA would have immediately envisioned a configuration of Shelton II's surgical instrument 1010 lacking the tension/compression spring 1184 and relying solely on the manual retraction



assembly.” Pet. Reply 2 (citing Pet. 37–38). Here, we credit Dr. Knodel’s testimony that,

a person of ordinary skill would have interpreted Shelton II’s reference at ¶0154 to “a manual retraction mechanism . . . [that] may be utilized without the assistance of a retraction spring” as indicating complete removal of tension/compression spring 1184 from the surgical instrument design. Otherwise, this discussion of additional embodiments at the end of Shelton II would have been redundant to the earlier description at ¶0144 where tension/compression spring 1184 is installed but “disconnected.” Further still, Shelton II makes clear at ¶0154 that other aspects of the previously-described retraction mechanism would remain the same (i.e., “consistent”), meaning that tension/compression spring 1184 would not be replaced by a different type of force generating component.

Ex. 1003 ¶ 60. That is, Dr. Knodel understands paragraph 154 of Shelton II “as indicating complete removal of tension/compression spring 1184 from the surgical instrument design” (*id.*), as opposed to simply allowing manual retraction to be performed without its assistance. And, given the overall disclosure of Shelton II, we credit Dr. Knodel’s testimony that one of ordinary skill in the art would have appreciated that “configuration of Shelton II’s surgical instrument 1010—without tension/compression spring 1184 (and all of its associated components) and relying solely upon the above-discussed manual retraction assembly components to retract the E-beam firing member—would have been readily visualized by the ordinarily skilled person.” *Id.* ¶ 62.

Relying on its expert Dr. Awtar, Patent Owner argues that “Paragraph [0154] corresponds to Paragraph [0144], which describes that the manual retraction mechanism can be used if the retraction spring disconnects (i.e., without assistance of the spring).” PO Sur-Reply 7 (citing Ex. 2019C ¶ 92). According to Patent Owner, Petitioner’s expert, “Dr. Knodel[,] admitted in

his deposition that Paragraph [0154] does not describe removal of the retraction spring, but instead refers to Paragraph [0144].” PO Sur-Reply 7–8 (quoting Ex. 2020, 40:14–41:17, 40:9–10). We do not agree.

Initially, we disagree with Patent Owner and Dr. Awtar that paragraph 154 of Shelton II simply corresponds to the disclosure in paragraph 144 of Shelton II, which discloses manual retraction in a scenario where tension/compression spring 1184 becomes disconnected. PO Sur-Reply 7–9; Ex. 1004 ¶¶ 144, 154. Instead, we agree with Petitioner that one of ordinary skill in the art would have understood paragraph 154 of Shelton II as “identifying a *modification* of Shelton II’s prior illustrated embodiments.” Pet. Reply 3 (citing Ex. 1029 ¶ 7). And, given the overall disclosure of Shelton II, we credit Dr. Knodel’s testimony that one of ordinary skill in the art would have appreciated that

when Paragraph [0154] says “a manual retraction mechanism consistent with aspects of the invention may be utilized *without the assistance of a retraction spring*,” the logical way to interpret this is that the same devices shown and discussed throughout the specification can be provided “without” the retraction spring. Again, it would not make sense to read this statement as referencing a scenario where the retraction spring becomes disconnected, as this was already described at Paragraph [0144] and illustrated at Figure 44.

Ex. 1029 ¶ 8; *see also id.* ¶ 7 (“Each paragraph following Paragraph [0148] describes something *additional*—an embodiment modified from those illustrated in Shelton II’s figures and described in the preceding sections of the [S]pecification.”). Consequently, we are not persuaded by Patent Owner’s assertion that Shelton II cannot anticipate the challenged claims because every embodiment in Shelton II includes a retraction system that

incorporates “a spring or other force generating member that acts to place a drag on the firing drive.” PO Resp. 3, 48–52.

We also disagree with Patent Owner that “Dr. Knodel admitted in his deposition that Paragraph [0154] does not describe removal of the retraction spring, but instead refers to Paragraph [0144].” Instead, we find Patent Owner’s argument mischaracterizes and improperly paraphrases Dr. Knodel’s deposition testimony. *See, e.g.*, Ex. 2020, 39:3–41:17. Here, the portion of Dr. Knodel’s deposition testimony relied on by Patent Owner is in response to Patent Owner’s counsel asking Dr. Knodel if he “believe[s] that paragraph 154 is teaching a person of ordinary skill to remove the retraction spring from the embodiments disclosed in Shelton II.” Ex. 2020, 39:3–6. However, under anticipation the issue is not whether paragraph 154 of Shelton II would teach or suggest one “of ordinary skill in the art to remove the retraction spring from the embodiments disclosed in Shelton II”; but rather, whether

a POSITA would have immediately envisioned a configuration of Shelton II’s surgical instrument 1010 lacking the tension/compression spring 1184 and relying solely on the manual retraction assembly. Pet., 37-38; *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381-83 (Fed. Cir. 2015) (“[A] reference can anticipate a claim . . . if a person of skill in the art, reading the reference, would *at once envisage* the claimed arrangement or combination.”).

Pet. Reply 2. Consistent with this understanding, Dr. Knodel states that paragraph “154 does not tell you to take out the spring. It tells you that the spring -- that a retraction spring would not be utilized in the manual retraction.” Ex. 2020, 40:17–22. Thus, we credit Dr. Knodel’s deposition testimony for the proposition that Shelton II discloses “manual retraction with or without the assistance of a retraction spring” (*id.* at 38:18–21), but

“[i]n the case of without the assistance of a retraction spring, then the retraction spring is not there.” *Id.* at 38:21–39:1; *see also id.* at 54:1–6 (“[W]hat I’m saying in this deposition right now and what I said in my previous declaration is that the instrument could work without the tension compression spring 184 for performing the manual retraction function.”).

We also are not persuaded by Patent Owner’s argument that “there are numerous reasons why [a] POSITA would not have interpreted Paragraph [0154] in the manner proposed by Dr. Knodel” (PO Resp. 58 (citing Ex. 2019 ¶¶ 91–102)), and as such, one of ordinary skill would not immediately envision removing the retraction spring from Shelton II.

Patent Owner first argues that one of ordinary skill in the art would not “immediately envision” removing Shelton II’s retraction spring because “Shelton II repeatedly describes advantages of including the spring and accordingly incorporates it into each embodiment.” PO Resp. 58 (citing Ex. 1004 ¶ 14; Ex. 2019 ¶ 93). However, we agree with Petitioner that Shelton II teaches that automatic retraction is optional. Pet. Reply 3 (citing Ex. 1004 ¶ 152; Ex. 1029 ¶ 9).<sup>21</sup> Here, we credit Dr. Knodel’s testimony that

[p]aragraph [0152] of Shelton II makes clear that the retraction spring is “desirable” but “a manual retraction may be incorporated without this feature.” From the perspective of an ordinarily skilled person, this means the retraction spring is optional. When paired with Paragraph [0154]’s further statement

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<sup>21</sup> Patent Owner argues that Petitioner’s reliance on previously unrelayed upon paragraph 152 of Shelton II “is improper, and should not be considered.” PO Sur-Reply 9 (citing *Ariosa Diagnostics Inc. v. Verinata Health, Inc.*, 805 F.3d 1359, 1367 (Fed. Cir. 2015)). We conclude, however, that Dr. Knodel’s testimony and the related discussion regarding paragraph 152 of Shelton II in the Petitioner Reply is responsive to arguments made by Patent Owner in its Response and opinions expressed by Dr. Awtar in his declaration. *See, e.g.*, PO Resp. 58 (citing Ex. 2019 ¶¶ 91–102).

that “a manual retraction mechanism . . . may be utilized without the assistance of a retraction spring,” it is clear that Shelton II is encouraging a person of skill to consider an embodiment where the optional spring is removed.

Ex. 1029 ¶ 9 (footnote omitted).

In response, Patent Owner argues that paragraph 152 of Shelton II does not “teach that the retraction spring is optional.” PO Sur-Reply 10 (citing Ex. 1004 ¶ 152). According to Patent Owner, Dr. Knodel explained that paragraph 152 of Shelton II “describes an instrument that *includes* a retraction spring to provide assistance to a manual retraction mechanism.” PO Sur-Reply 10 (citing Ex. 2020, 49:9–19). Dr. Knodel, however, did not simply testify that paragraph 152 of Shelton II “describes an instrument that *includes* a retraction spring to provide assistance to a manual retraction mechanism”; but instead, opines that paragraph

152 is the case where the -- we don’t have automatic retraction. We have manual retraction. And it is replaced there, but it’s moot on whether the manual retraction is implemented with assistance from a retraction spring or without assistance from a retraction spring. I believe 152 leaves it open for -- that it could be either way. And then 154 clarifies that in this sentence, I want to be very clear that I’m talking about a manual retraction that is utilized without the assistance of a retraction spring.

Ex. 2020, 48:20–49:8. Thus, Patent Owner’s argument does not persuade us that one of ordinary skill would not have immediately envisioned removing the retraction spring from Shelton II simply because Shelton II describes including a spring in the illustrated embodiments.

Patent Owner next argues that one of ordinary skill in the art would not “immediately envision” removing Shelton II’s retraction spring because doing so “would significantly alter how the user operates its device.” PO Resp. 58 (citing Ex. 2019 ¶ 94). According to Patent Owner, “Shelton II

explains that the retraction spring functions to (1) automatically retract the firing member, and/or (2) provide some retraction force to assist the clinician in retracting the firing member.” PO Resp. 58–59 (citing Ex. 1004 ¶¶ 73, 122). Thus, Patent Owner argues that “removal of the retraction spring would be inconsistent with the invention of Shelton II, which is an instrument that includes a spring that assists in retraction.” PO Resp. 59 (citing Ex. 1004 ¶ 14; Ex. 2019 ¶ 94). However, we agree with Petitioner that “Shelton II did not confine its disclosure or claimed inventions to an automatic retraction spring.” Pet. Reply 4 (citing Ex. 1004 ¶ 152). We also credit the testimony of Dr. Knodel that “Shelton II’s device without a retraction spring would work the same way as when the retraction spring is disconnected. In each instance, the spring has no effect, and the user pulls back on the manual lever to retract the firing drive.” Ex. 1029 ¶ 10. Thus, Patent Owner’s argument is not persuasive.

Patent Owner further argues that one of ordinary skill in the art would not “immediately envision” removing Shelton II’s retraction spring because retraction springs were consistently used in the prior art to assist in retracting the firing member. PO Resp. 59 (citing Ex. 2019 ¶ 95). Thus, Patent Owner argues that “removal of the spring would be contrary to the conventional wisdom of endoscopic surgical staplers at the time of the 749 Patent.” PO Resp. 59 (citing Ex. 2019 ¶¶ 95–97).

However, we agree with Petitioner that “[p]aragraph [0154]’s disclosure of ‘a manual retraction mechanism . . . without the assistance of a retraction spring’ clearly conveys an instrument that retracts without the previously-disclosed spring.” Pet. Reply 3. As Petitioner and Dr. Knodel point out, “[t]he record evidence shows that both configurations—automatic and manual retraction—were part of conventional wisdom.” *Id.* at 6; Ex.

1029 ¶¶ 16–17 (citing Ex. 2018, 18:12–19:13); *see also* Ex. 1029 ¶ 11 (Dr. Knodel states that “[b]y the time of the ’749 Patent, the 2006-2007 timeframe, both automatic retraction and fully manual retraction mechanisms [without springs] were part of the conventional wisdom.”) (footnote omitted).

Patent Owner last argues that one of ordinary skill in the art would not “immediately envision” removing Shelton II’s retraction spring because “a POSITA would have underst[ood] that Shelton II would not reliably retract the firing member if the spring were removed from the instrument.” PO Resp. 61 (citing Ex. 2019 ¶¶ 98–101). Relying on its expert, Dr. Awtar, Patent Owner argues that if the spring in Shelton II were removed, “there would be no component to guide the linked rack back into the pistol grip during retraction” (PO Resp. 62 (citing Ex. 2019 ¶¶ 99–100)), and as such, “the linked rack would be prone to binding in certain conditions because it would engage obstructions that prevent it from returning to the pistol grip of the handle assembly (thus preventing full retraction).” PO Resp. 62 (citing Ex. 2019 ¶ 100). We are not persuaded by Patent Owner’s argument.

The difficulty with Patent Owner’s argument is that it is premised solely on Dr. Awtar’s speculation that “the linked rack would be prone to binding” without a retraction spring. PO Resp. 62 (citing Ex. 1029 ¶¶ 99–100). Yet, as Petitioner points out, Dr. Awtar conceded during deposition that “[t]here is no reference to a binding problem in the text of the Shelton II patent specification.” Pet. Reply 6–7 (quoting Ex. 1015, 71:3–5).

Instead, we credit Dr. Knodel’s testimony that

[b]ecause Shelton II’s retraction spring does not guide the proximal end of the linked rack, its removal would not lead to the binding problem alleged by Dr. Awtar. If such a problem existed in Shelton II’s device, it would have been present

regardless of the retraction spring. But Shelton II[] says nothing about a potential binding problem, which tends to suggest that no such problem exists.

Ex. 1029 ¶ 21. In addition, given the overall disclosure of Shelton II, we credit Dr. Knodel’s testimony that

even if there were such a binding problem (with or without the retraction spring), a person of ordinary skill would have readily solved it. For example, a track or guide surface built into the housing could be used to direct the linked rack into the handle of the device. This would have been a trivial matter for an ordinarily skilled person to resolve.

*Id.* ¶ 22. Thus, we conclude that Shelton II discloses “a manual retraction mechanism . . . without the assistance of a retraction spring” (Ex. 1004 ¶ 154) and the evidence supports Petitioner’s position that that one of ordinary skill “would have immediately envisioned a configuration of Shelton II’s surgical instrument 1010 lacking the tension/compression spring 1184 and relying solely on the manual retraction assembly.” Pet. 37–38 (citing Ex. 1003 ¶ 62). *See Blue Calypso*, 815 F.3d at 1343–44.

#### 6. *Conclusion*

We have reviewed Petitioner’s contentions regarding independent claim 1, and are persuaded that Petitioner has proven, by a preponderance of the evidence, that independent claim 1 is anticipated by Shelton II.

#### 7. *Dependent Claim 3*

Patent Owner does not argue separately dependent claim 3 in its Response, only disputing Petitioner’s contentions with respect to parent claim 1. *See Generally*, PO Resp; PO Sur-Reply.

We have reviewed Petitioner’s contentions regarding claim 3, which are consistent with the disclosure of Shelton II and supported by the testimony of Dr. Knodel, and are persuaded that Petitioner has proven, by a



preponderance of the evidence, that dependent claim 3 is anticipated by Shelton II. *See* Pet. 44–50.

8. *Conclusion*

We have carefully considered the positions of the parties as to whether Shelton II anticipates claims 1 and 3 of the '749 patent and the evidence cited in support of those respective positions. We conclude that Petitioner has shown, in its Petition, where all the limitations of claims 1 and 3, as they are arranged in those claims, are found in Shelton II. *See* Pet. 24–50. Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that claims 1 and 3 are anticipated by Shelton II.

B. *Petitioner's Additional Challenges*

Petitioner presents an alternative asserted ground of unpatentability of claims 1 and 3 as obvious over Shelton II. Pet. 39–44. Petitioner also presents two additional grounds of unpatentability of claims 1 and 3 as anticipated/obvious over Swayze (*id.* at 50–57) and obvious over Shelton I. *Id.* at 57–85. Because the challenge based on Shelton II, discussed above, is dispositive of all the challenged claims, we need not reach Petitioner's other challenges as to these same claims. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”). *Cf. In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009) (not reaching other grounds of unpatentability after affirming a ground based on anticipation); *see also Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (an administrative agency is at liberty to reach a decision based on a dispositive issue).

## V. MOTION TO EXCLUDE

Petitioner has filed a Motion to Exclude. Paper 36.<sup>22</sup> Petitioner seeks “to exclude, in whole or in part, Exhibits 2003-2007, 2009 and 2013-2015.” *Id.* at 1. Petitioner also seeks to exclude “Exhibit 2003 and Appendices 1–2 of Exhibit 2009 (the Hearsay Exhibits)” as improper hearsay under Federal Rule of Evidence 801 and as unauthenticated under Federal Rule of Evidence 901. *Id.* at 1–10. Petitioner further seeks to exclude Exhibits 2004–2007 as unauthenticated under Federal Rule of Evidence 901. *Id.* at 5–10. Petitioner still further seeks to exclude Exhibits 2013–2015 as they violate the Board’s rules. *Id.* at 11–12 (citing 37 C.F.R. §§ 42.53(a), (f)).

Petitioner’s Motion is dismissed as moot because it seeks to exclude evidence not considered or relied upon in rendering this Decision.

## VI. CONCLUSION

Based on the information presented, we conclude that Petitioner has shown, by a preponderance of the evidence, that claims 1 and 3 of the ’749 patent are unpatentable.<sup>23</sup>

In summary:

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<sup>22</sup> A public, redacted version of Petitioner’s Motion to Exclude was filed as Paper 35.

<sup>23</sup> Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*, 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

| <b>Claims</b>              | <b>35<br/>U.S.C.<br/>§</b> | <b>Reference(s)/<br/>Basis</b> | <b>Claims<br/>Shown<br/>Unpatentable</b> | <b>Claims Not<br/>Shown<br/>Unpatentable</b> |
|----------------------------|----------------------------|--------------------------------|--|--|
| 1, 3                       | 102/103                    | Shelton II                     | 1, 3                                     |  |
| 1, 3                       | 102/103                    | Swayze <sup>24</sup>           |  |  |
| 1, 3                       | 102                        | Shelton I                      |  |  |
| <b>Overall<br/>Outcome</b> |                            |                                | 1, 3                                     |  |

## VII. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1 and 3 of the '749 patent have been shown to be unpatentable;

FURTHER ORDERED that Petitioner's Motion to Exclude is *dismissed as moot*; and

FURTHER ORDERED that because this is a Final Written Decision, parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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<sup>24</sup> As explained above, because we find that Petitioner has demonstrated claims 1 and 3 are anticipated by Shelton II, it is unnecessary for us to reach the remaining grounds of unpatentability proposed by Petitioner. *In re Gleave*, 560 F.3d at 1338.

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