

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTUITIVE SURGICAL, INC.,
Petitioner,

v.

ETHICON LLC,
Patent Owner.

IPR2018-01254
Patent 8,479,969 B2

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

MEYERS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Intuitive Surgical, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–11 and 24 of U.S. Patent No. 8,479,969 B2 (Ex. 1001, “the ’969 patent”). Ethicon LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”) to the Petition. In our Decision on Institution (Paper 7, “Dec. on Inst.”), we determined that the information presented in the Petition and Preliminary Response established a reasonable likelihood that Petitioner would prevail in its challenge of claims 1–11 and 24 of the ’969 patent as unpatentable under 35 U.S.C. § 103 and, accordingly, we instituted *inter partes* review as to those claims. *See* 35 U.S.C. § 314(a) (2012).

During the course of trial, Patent Owner filed a Patent Owner Response (Paper 14, “PO Resp.”), Petitioner filed a Reply to Patent Owner Response (Paper 17, “Pet. Reply”), Patent Owner filed redacted and unredacted versions of its Sur-reply (Papers 26 and 27) to Petitioner’s Reply (Paper 26, “PO Sur-reply”), and Petitioner filed a Sur-sur-reply to Patent Owner’s Sur-reply (Paper 31, “Pet. Sur-sur-reply”).¹ A combined hearing for this case and related cases IPR2018-01247 and IPR2018-01248 was held on October 17, 2019, and a transcript of the hearing is included in the record. Paper 40. Patent Owner also filed an unopposed Motion to Seal. Paper 25.

We have jurisdiction 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. To prevail, Petitioner must prove

¹ Our decision does not rely on any information deemed confidential by the parties.

unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d) (2017). This decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–11 and 24 of the ’969 patent. For the reasons discussed below, we hold that Petitioner has demonstrated by a preponderance of the evidence that claims 1–10 of the ’969 patent are unpatentable under § 103(a). We also hold that Petitioner has not demonstrated by a preponderance of the evidence that claims 11 and 24 of the ’969 patent are unpatentable under § 103(a).

II. BACKGROUND

A. *The ’969 Patent*

The ’969 patent issued July 9, 2013 from an application filed February 9, 2012, and claims priority, as a continuation, to an application filed May 27, 2011, which claims priority, as a continuation-in-part, to an application filed January 10, 2007. Ex. 1001, codes (45), (22), (63).² The ’969 patent is titled “Drive Interface for Operably Coupling a Manipulatable Surgical Tool to a Robot,” and generally relates to endoscopic surgical instruments. *Id.* at code (54); 1:54–57. The ’969 patent summarizes its disclosure as encompassing a surgical instrument “for use with a robotic system that has a control unit and a shaft portion,” which together with an electrically conductive elongated member, “transmit[s] control motions from the robotic system to an end effector.” *Id.* at code (57). Figure 26 of the ’969 patent is reproduced below:

² The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 100 *et seq.* effective on March 16, 2013. Because the ’969 patent issued from an application filed before March 16, 2013, we apply the pre-AIA versions of the statutory bases for unpatentability.

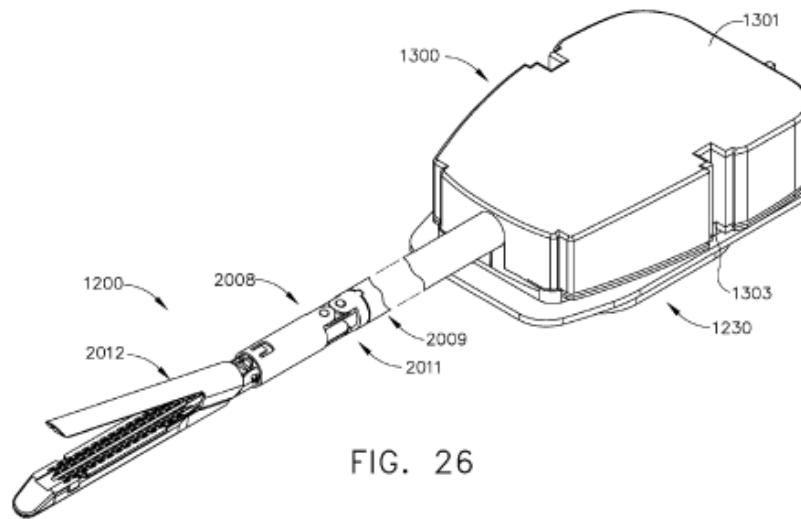


Figure 26 depicts “a perspective view of a surgical tool embodiment of the present invention.” *Id.* at 5:19–20. Figure 26 illustrates surgical tool 1200 with end effector 2012, elongated shaft assembly 2008, and articulation joint 2011. *Id.* at 24:66–25:5. The ’969 patent describes that surgical tool 1200 is coupled to a robotic manipulator (not shown) by tool mounting portion 1300. *Id.* at 25:5–7.

Figure 31 of the ’969 patent is reproduced below:

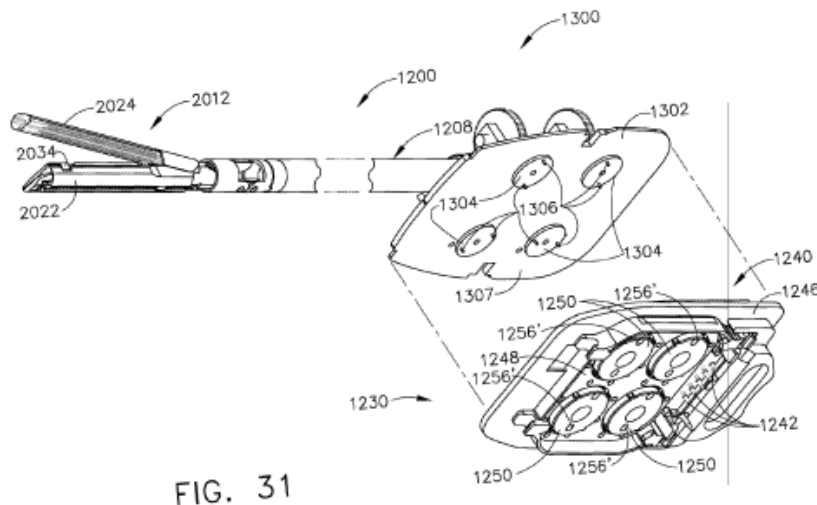


Figure 31 depicts “a partial bottom perspective view of the surgical tool embodiment of FIG. 26.” *Id.* at 5:27–28. Figure 31 illustrates “tool

mounting portion 1300 includes a tool mounting plate 1302 that operably supports a plurality of (four are shown in FIG. 31) rotatable body portions, driven discs or elements 1304, that each include a pair of pins 1306 that extend from a surface of the driven element 1304.” *Id.* at 25:11–16. Figure 31 further depicts that “[i]nterface 1230 includes an adaptor portion 1240 that is configured to mountingly engage the mounting plate 1302.” *Id.* at 25:19–22. The ‘969 patent describes that “adapter portion 1240 generally includes a tool side 1244 and a holder side 1246.” *Id.* at 25:30–31.

Figure 27 of the ‘969 patent is reproduced below:

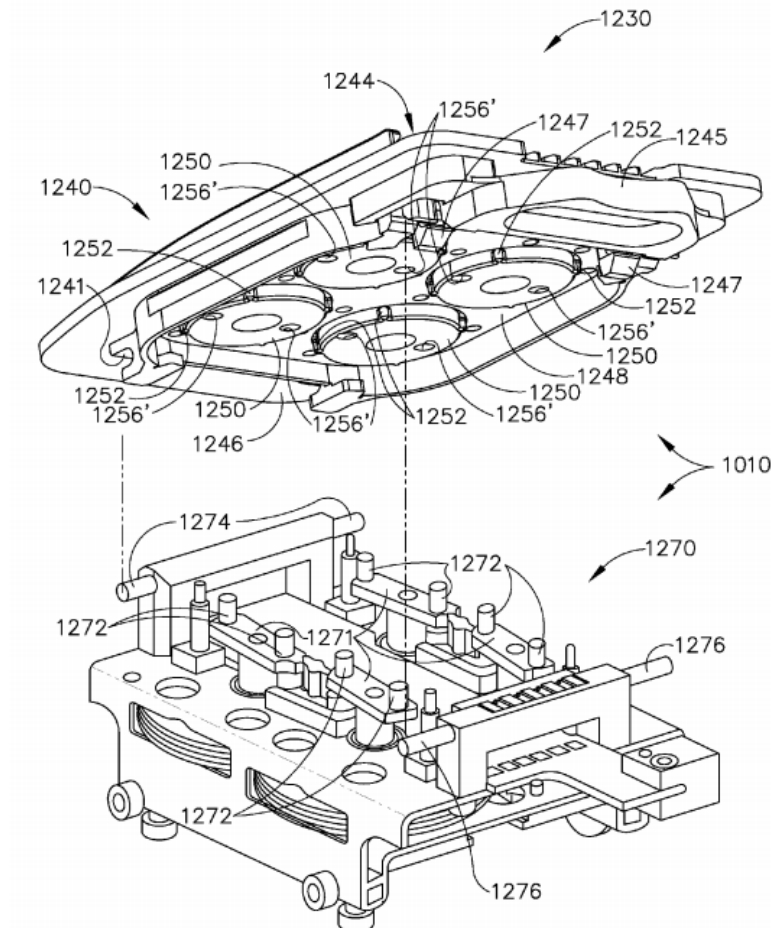


FIG. 27

Figure 27 depicts “an exploded assembly view of an adapter and tool holder arrangement for attaching various surgical tool embodiments to a robotic system.” *Id.* at 5:21–23. More particularly, Figure 27 illustrates that tool drive assembly 1010 “is operatively coupled to a master controller 1001.” *Id.* at 24:62–66.

B. The Challenged Claims

Petitioner challenges claims 1–11 and 24 of the '969 patent. Challenged claims 1 and 24 are independent. Claims 2–11 ultimately depend from claim 1. Claims 1 and 24 are illustrative and are reproduced below.

1. A surgical tool for use with a robotic system that has a tool drive assembly that is operatively coupled to a control unit of the robotic system that is operable by inputs from an operator and is configured to provide at least one rotary output motion to at least one rotatable body portion supported on the tool drive assembly, said surgical tool comprising:

a surgical end effector comprising:

an elongated channel configured to operably support a surgical staple cartridge therein;

an anvil that is selectively movable between a first open position and second closed positions relative to the elongated channel and wherein the surgical tool further comprises:

an elongated shaft assembly operably coupled to said surgical end effector, said elongated shaft assembly comprising:

a spine assembly including a distal end portion that is coupled to said elongated channel;

a closure tube assembly movably supported on said spine assembly, said closure tube assembly comprising a distal end configured for operable interaction with said anvil; and

- at least one gear-driven portion, wherein one said gear driven portion is in operable communication with said closure tube assembly and wherein said surgical tool further comprises:
 - a tool mounting portion operably coupled to said elongated shaft assembly, said tool mounting portion being configured to operably interface with the tool drive assembly when coupled thereto and operably supporting a proximal end of the spine assembly thereon, said tool mounting portion comprising:
 - a driven element rotatably supported on said tool mounting portion and configured for driving engagement with a corresponding one of the at least one rotatable body portions of the tool drive assembly to receive corresponding rotary output motions therefrom; and
 - a transmission assembly in operable engagement with said driven element and in meshing engagement with a corresponding one of said at least one gear-driven portions to apply actuation motions thereto to cause said corresponding one of said at least one gear driven portions to apply at least one control motion to said closure tube assembly.

Ex. 1001, 88:13–56.

24. A surgical tool for use with a robotic system that has a tool drive assembly that is operatively coupled to a control unit of the robotic system that is operable by inputs from an operator and is configured to provide at least one rotary output motion to at least one rotatable body portion supported on the tool drive assembly, said surgical tool comprising:

- a surgical end effector comprising at least one component portion that is selectively movable between first and second positions relative to at least one other component portion thereof in response to control motions applied to said selectively movable component portion;
- an elongated shaft assembly defining a longitudinal tool axis and comprising:

- a distal spine portion operably coupled to said end effector; and
- a proximal spine portion pivotally coupled to said distal spine portion at an articulation joint to facilitate articulation of said surgical end effector about an articulation axis that is substantially transverse to said longitudinal tool axis; and
- at least one gear-driven portion that is in operable communication with said at least one selectively movable component portion of said surgical end effector and wherein said surgical tool further comprises:
 - a tool mounting portion operably coupled to a proximal³ end of said proximal spine portion, said tool mounting portion being configured to operably interface with the tool drive assembly when coupled thereto, said tool mounting portion comprising:
 - a driven element rotatably supported on said tool mounting portion and configured for driving engagement with a corresponding one of the at least one rotatable body portions of the tool drive assembly to receive corresponding rotary output motions therefrom; and
 - a transmission assembly in operable engagement with said driven element and in meshing engagement with a corresponding one of said at least one gear-driven portions to apply actuation motions thereto to cause said corresponding one of said at least one gear driven portions to apply at least one control motion to said selectively movable component.

Id. at 95:35–96:14.

³ A Certificate of Correction, mailed January 23, 2018, deleted the term “distal” here in claim 24 of the ’969 patent, and inserted in its place the term “proximal.” Ex. 1002, 686.

C. Related Proceedings

The parties indicate that the '969 patent is involved in: *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 1:17-cv-00871 in the United States District Court for the District of Delaware (“the Delaware litigation”).⁴ Pet. 6; Paper 4, 2.

Petitioner is also challenging the '969 patent as well as other related patents in the following proceedings before the Board: (1) Case No. IPR2018-00933 (the '601 patent); (2) Case No. IPR2018-00934 (the '058 patent); (3) Case No. IPR2018-00938 (the '874 patent); (4) Case Nos. IPR2018-01248 and IPR2018-01247 (the '969 patent); (5) Case No. IPR2018-00936 (the '658 patent); (6) Case No. IPR2018-01703 (the '431 patent); and (7) Case No. IPR2019-00880 (U.S. Patent No. 7,490,749). Paper 4, 2.

D. 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. Patent Owner indicates that it is “an indirect subsidiary of Johnson & Johnson.” Paper 4, 2.

E. Evidence Relied Upon

Petitioner relies on the following references in asserting that claims 1–11 and 24 of the '969 patent are unpatentable:

⁴ Patent Owner contends that U.S. Patent Nos. 9,585,658 B2 (“the '658 patent”), 8,616,431 B2 (“the '431 patent”), 9,113,874 B2 (“the '874 patent”), 9,113,874 B2 (“the '874 patent”), 9,084,601 B2 (“the '601 patent”), and 8,998,058 B2 (“the '058 patent”) are also asserted in the Delaware litigation. Paper 4, 2–3

Reference	Exhibit No.
U.S. Patent No. 6,699,235 B2 issued Mar. 2, 2004 (“Wallace”)	1008
U.S. Patent No. 6,331,181 B1 issued Dec. 18, 2001 (“Tierney”)	1009
U.S. Patent App. Pub. No. US 2008/0167672 A1 published July 10, 2008 (“Giordano”)	1014
U.S. Patent No. 6,978,921 B2 issued Dec. 27, 2005 (“Shelton”)	1015
U.S. Patent App. Pub. No. US 2007 /0158385 A1 published July 12, 2007 (“Hueil”)	1016

F. Instituted Grounds of Unpatentability

We instituted review of claims 1–11 and 24 of the ’969 patent based on the following asserted grounds of unpatentability. Pet. 1–6, 20–96.

References	35. U.S.C. §	Claims Challenged
Giordano, Wallace	103	1–11, 24
Giordano, Wallace, Tierney	103	1–11, 24
Shelton, Wallace, Tierney	103	1–6, 9–10
Shelton, Giordano, Wallace, Tierney	103	7, 8, 11, 24
Shelton, Wallace, Tierney, Hueil	103	5, 6

In support of its asserted grounds of unpatentability, Petitioner relies on the testimony of its expert witness, Dr. Bryan Knodel. Ex. 1005 (“Knodel Decl.”); Ex. 1017 (“Knodel Supp. Decl.”). In support of its response, Patent Owner relies on the testimony of its expert witness, Dr.

Shorya Awtar. Ex. 2005 (“Awtar Decl.”). Both experts were cross-examined. *See* Ex. 1019 (deposition transcript of Dr. Shorya Awtar, “Awtar Dep. I”); Ex. 2011 (deposition transcript of Dr. Bryan Knodel, “Knodel Dep.”).

III. ANALYSIS

A. Claim Construction

In an *inter partes* review filed before November 13, 2018, such as this one, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.⁵ 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). The presumption may be overcome by providing a definition of the term in the specification with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184

⁵ This Petition was filed before the effective date of the amendment to 37 C.F.R. § 42.100 that changed the claim construction standard applied in *inter partes* reviews. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018). Thus, we use the broadest reasonable interpretation claim construction standard for this proceeding.

(Fed. Cir. 1993). Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999); *see also 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).

Here, neither Petitioner nor Patent Owner identifies terms for construction or provides any proposed constructions. Pet. 12; PO Resp. 10; *see generally* Pet. Reply; Prelim. Resp. 11. Instead, the parties agree that claims of the ’969 patent should be construed according to their broadest reasonable interpretation. Pet. 12; PO Resp. 10. We determine that no claim term needs express interpretation. *See Vivid Techs.*, 200 F.3d at 803 (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

B. Level of Ordinary Skill in the Art

Petitioner’s expert, Dr. Knodel, testifies the following in connection with the level of ordinary skill in the art:

A person of ordinary skill in the art [(POSITA)] at the time of the alleged invention would have had the equivalent of a Bachelor’s degree or higher in mechanical engineering with at least 3 years working experience in the design of comparable surgical devices. Additional education in a relevant field, such as mechanical engineering or robotics (to the extent pertinent), or industry experience may compensate for a deficit in one of the other aspects of the requirements stated above.

Ex. 1005 ¶ 26.

Patent Owner does not appear to dispute Petitioner’s definition of one of ordinary skill in the art. *See generally* PO Resp. Neither party argues that

the outcome of this case would differ based on our adoption of any particular definition of one of ordinary skill in the art. In light of the record now before us, we adopt Petitioner’s definition of one of ordinary skill in the art. The level of ordinary skill in the art is also reflected by the references themselves. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown.’”); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (finding that the Board of Patent Appeals and Interferences did not err in concluding that the level of ordinary skill in the art was best determined by the references of record).

C. Post-Institution Summary

In our Decision on Institution, we concluded that the arguments and evidence advanced by Petitioner demonstrated a reasonable likelihood that (1) claims 1–11 and 24 of the ’969 patent are unpatentable under 35 U.S.C. § 103(a) over Giordano and Wallace, (2) claims 1–11 and 24 of the ’969 patent are unpatentable under 35 U.S.C. § 103(a) over Giordano, Wallace, and Tierney, (3) claims 1–6 and 9–10 of the ’969 patent are unpatentable under 35 U.S.C. § 103(a) over Shelton, Wallace, and Tierney, (4) claims 7, 8, 11, and 24 of the ’969 patent are unpatentable under 35 U.S.C. § 103(a) over Shelton, Giordano, Wallace, and Tierney, and (5) claims 5 and 6 of the ’969 patent are unpatentable under 35 U.S.C. § 103(a) over Shelton, Wallace, Tierney, and Hueil. Dec. on Inst. 11–27.

We must now determine whether Petitioner has established by a preponderance of the evidence that the specified claims are unpatentable

over the cited prior art. 35 U.S.C. § 316(e). We previously instructed Patent Owner that “any arguments for patentability not raised in the [Patent Owner Response] will be deemed waived.” Paper 8, 5; *see also* 37 C.F.R.

§ 42.23(a) (“Any material fact not specifically denied may be considered admitted.”); *In re NuVasive, Inc.*, 842 F.3d 1376, 1379–1382 (Fed. Cir. 2016) (holding patent owner waived argument addressed in preliminary response by not raising argument in the patent owner response).

Additionally, the Board’s Trial Practice Guide states that the patent owner response “should identify all the involved claims that are believed to be patentable and state the basis for that belief.” Patent Trial and Appeal Board Consolidated Trial Practice Guide 66 (Nov. 2019) (“The Board will not institute on fewer than all claims or all challenges in a petition.”), *available at* <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

D. Ground 1: Claims 1–11 and 24 – Obvious over Giordano and Wallace

Petitioner contends that claims 1–11 and 24 would have been obvious over Giordano and Wallace. Pet. 20–90.

1. Principles of Law

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e.,

secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze this asserted ground based on obviousness with the principles identified above in mind.⁶

2. Overview of *Giordano* (Ex. 1014)⁷

Giordano is directed to an endoscopic or laparoscopic surgical instrument that includes “a shaft having a distal end connected to [an] effector and a handle connected to a proximate end of the shaft.” Ex. 1014 ¶ 15. Figure 2 of *Giordano* is reproduced below.

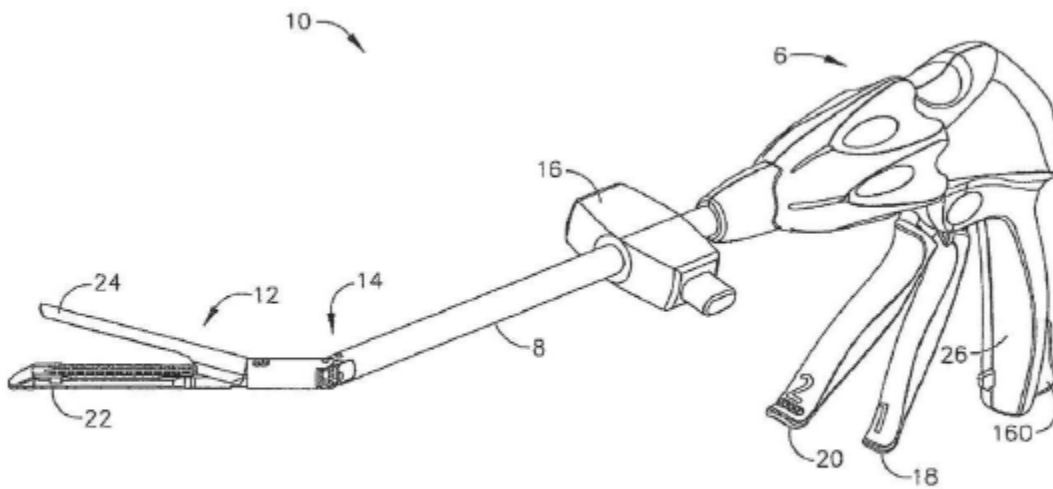


FIG. 2

Figure 2 depicts a perspective view of *Giordano*’s surgical instrument. *Id.* ¶ 21. More particularly, Figure 2 illustrates

a handle 6, a shaft 8, and an articulating end effector 12 pivotally connected to the shaft 8 at an articulation pivot 14. Correct

⁶ We note that the record does not contain any evidence or argument directed to objective indicia of non-obviousness.

⁷ *Giordano* is the published grandparent application to which the ’969 patent claims priority. Patent Owner does not contend that *Giordano* is not available as prior art. *See, e.g.*, PO Resp. 2–3, 12–15, 18–19.

placement and orientation of the end effector 12 may be facilitated by controls on the handle 6, including (1) a rotation knob 28 for rotating the closure tube . . . to thereby rotate the end effector 12 and (2) an articulation control 16 to effect rotational articulation of the end effector 12 about the articulation pivot 14.

Id. ¶ 34. Figure 2 also illustrates that handle 6 includes “a closure trigger 18 and a firing trigger 20 for actuating the end effector 12.” *Id.* ¶ 35. With respect to closure trigger 18, Giordano discloses that its “anvil 24 may be pivotably opened and closed at a pivot point 25,” shown in Figure 3, when closure trigger 18 is actuated. *Id.* ¶ 39. With respect to firing trigger 20, Giordano discloses that when

main drive shaft 48 is caused to rotate by actuation of the firing trigger 20 (as explained in more detail below), the bevel gear assembly 52*a-c* causes the secondary drive shaft 50 to rotate, which in turn, because of the engagement of the drive gears 54, 56, causes the helical screw shaft 36 to rotate, which causes the knife 32 to travel longitudinally along the channel 22 to cut any tissue clamped within the end effector.

Id. ¶ 42; *see id.* at Fig. 5.

Giordano incorporates Shelton by reference to provide “more details about such two-stroke cutting and fastening instruments.” *Id.* ¶ 39. Accordingly, we discuss Shelton next.

3. Overview of Shelton (Ex. 1015)

Shelton is titled “Surgical Stapling Instrument Incorporating an E-Beam Firing Mechanism.” Ex. 1015, code (54). Shelton is directed to a surgical severing and stapling instrument that is suitable for laparoscopic and endoscopic clinical procedures. *Id.* at code (57). Figure 6 of Shelton is reproduced below:

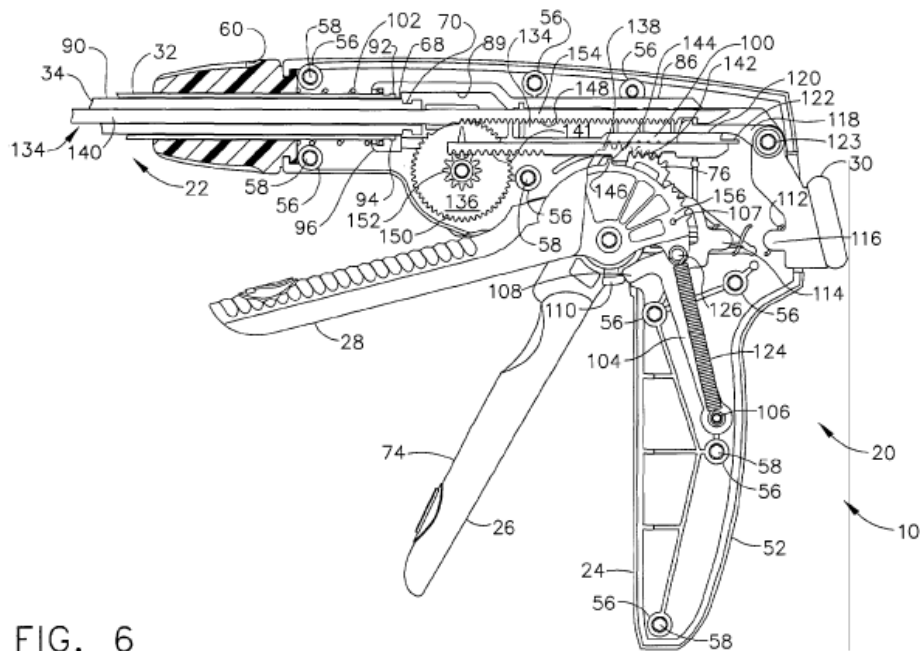


FIG. 6

Figure 6 illustrates handle portion 20 including separate closure trigger 26 and firing trigger 28. *Id.* at 7:6–8:38. Shelton discloses “closure yoke 86 is housed within the handle portion 20 for reciprocating movement therein and serves to transfer motion from the closure trigger 26 to the closure sleeve 32.” *Id.* at 7:51–53. To position end effector 12, Shelton discloses

proximal end 90 of the closure sleeve 32 is provided with a flange 92 that is snap-fitted into a receiving recess 94 formed in a distal end 96 of the yoke 86. A proximal end 98 of the yoke 86 has a gear rack 100 that is engaged by the gear segment section 76 of the closure trigger 26. When the closure trigger 26 is moved toward the pistol grip 24 of the handle portion 20, the yoke 86 and, hence, the closure sleeve 32 move distally, compressing a spring 102 that biases the yoke 86 proximally.

Id. at 7:58–67. Shelton discloses “handle portion 20 is illustrative and that other actuation mechanisms may be employed. For instance, the closing and firing motions may be generated by automated means.” *Id.* at 9:47–50.

4. *Overview of Wallace (Ex. 1008)*

Wallace is titled “Platform Link Wrist Mechanism.” Ex. 1008, code (54). Wallace’s Abstract reads as follows:

The present invention provides a robotic surgical tool for use in a robotic surgical system to perform a surgical operation. The robotic surgical tool includes a wrist mechanism disposed near the distal end of a shaft which connects with an end effector. The wrist mechanism includes a distal member configured to support the end effector, and a plurality of rods extending generally along an axial direction within the shaft and movable generally along this axial direction to adjust the orientation of the distal member with respect to the shaft. The distal member has a base to which the rods are rotatably connected by orthogonal linkage assemblies.

Id. at code (57). Figure 1 of Wallace is reproduced below:

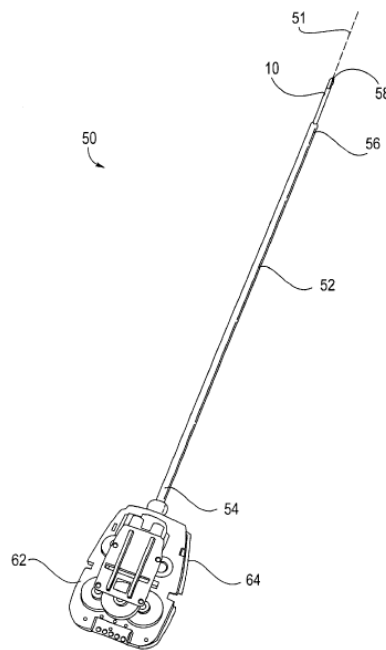


Fig. 1

Figure 1 “is a perspective overall view of an embodiment of the surgical tool of the present invention.” *Id.* at 6:26–27. Figure 1 illustrates surgical tool 50 including

rigid shaft 52 having a proximal end 54, a distal end 56 and a longitudinal axis there between. The proximal end 54 is coupled to a tool base 62. The tool base 62 includes an interface 64 which mechanically and electrically couples the tool 50 to a manipulator on the robotic arm cart. A distal member, in this embodiment a distal clevis 58, is coupled to shaft 52 by a wrist joint or wrist mechanism 10, the wrist mechanism 10 providing the distal clevis 58 with at least 1 degree of freedom and ideally providing at least 3 degrees of freedom. The distal clevis 58 supports a surgical end effector 66, the actual working part that is manipulable for effecting a predetermined treatment of a target tissue.

Id. at 7:33–47. Wallace discloses that “end effector 66 is manipulated by the wrist mechanism 10 to provide the ability of continuous movement in a wide range of angles (in roll, pitch and yaw) relative to an axial direction or the longitudinal axis 51 of the shaft 52.” *Id.* at 7:57–60. Wallace further discloses that its “wrist mechanism includes a distal member, configured to support the end effector, and a plurality of rods extending generally along an axial direction within the shaft and movable generally along this axial direction to adjust the orientation of the distal member with respect to the axial direction or shaft.” *Id.* at 3:54–59. Wallace additionally discloses that “[t]he plurality of rods may comprise two, three, four or more rods.” *Id.* at 4:28–29.

Wallace incorporates Tierney by reference to provide details regarding “Surgical Robotic Tools, Data Architecture, and Use.” *Id.* at 1:16–18. Accordingly, we discuss Tierney next.

5. Overview of Tierney (Ex. 1009)

Tierney is titled “Surgical Robotic Tools, Data Architecture, and Use.” Ex. 1009, code (54). More particularly, Tierney is directed to “surgical tools having improved mechanical and/or data interface

capabilities to enhance the safety, accuracy, and speed of minimally invasive and other robotically enhanced surgical procedures.” *Id.* at 1:11–15.

Tierney describes that robotic surgery generally involves the use of robotic arms which “often support a surgical tool which may be articulated (such as jaws, scissors, graspers, needle holders, microdissectors, staple appliers, tackers, suction/irrigation tools, clip appliers, or the like) or non-articulated (such as cutting blades, cautery probes, irrigators, catheters, suction orifices, or the like).” *Id.* at 6:20–28.

6. *Discussion*

Petitioner contends that claims 1–11 and 24 of the ’969 patent would have been obvious in view of the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) (“Giordano/Shelton”) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney) (“Wallace/Tierney”). Pet. 20–90. We have reviewed the Petition, Patent Owner Response, Petitioner Reply, Patent Owner Sur-reply, Petitioner Sur-sur-reply, as well as the relevant evidence discussed in those papers and other record papers, and are persuaded that the record establishes by a preponderance of the evidence Petitioner’s contentions for claims 1–10, and we adopt Petitioner’s contentions discussed below as our own findings and conclusions. However, as discussed in greater detail below, we determine that Petitioner has failed to make the requisite showing regarding claims 11 and 24.

a) Independent claim 1 and dependent claims 2–10

(1) Petitioner's Contentions

The preamble⁸ of independent claim 1 sets forth, among other things, “[a] surgical tool for use with a robotic system.” Petitioner asserts that “Giordano’s incorporation of Shelton discloses ‘surgical stapling and severing instrument 10’ (‘the Shelton stapler’), which is a manually operated surgical tool.” Pet. 21 (citing Ex. 1005 ¶¶ 49–55; Ex. 1015, 5:22–45, Figs. 1, 2). Although the surgical tool disclosed by Giordano/Shelton is manually operated, Petitioner asserts that it would have been obvious to modify the Shelton stapler for use with a robotic system based on the disclosure of Wallace/Tierney. Pet. 21 (citing Ex. 1005 ¶ 50).

Petitioner explains that “the closing motion of Shelton is driven by rotation of ‘gear segment section 76’ and the firing motion is driven by rotation of the “gear segment section 156.” Pet. 23. Petitioner asserts that Wallace discloses a surgical tool that has “tool base 62 which includes an interface 64 which mechanically and electrically couples the tool 50 to a manipulator on the robotic arm cart.” Pet. 24 (citing Ex. 1008, 7:37–40). Petitioner explains that the tool in Wallace includes “gears 400,” which are powered by a robotic system to provide “rotational actuation motions for Wallace’s instrument.” Pet. 24 (citing Ex. 1008, 13:48–54). Petitioner provides the following side-by-side reproduction of Figure 30 of Wallace and Figure 6 of Tierney, annotated to identify, among several items, gears 400 and driven elements 118. Pet. 24.

⁸ We need not decide whether the preamble of claim 1 is limiting for purposes of this Decision, because Petitioner has shown that the cited art teaches the preamble.

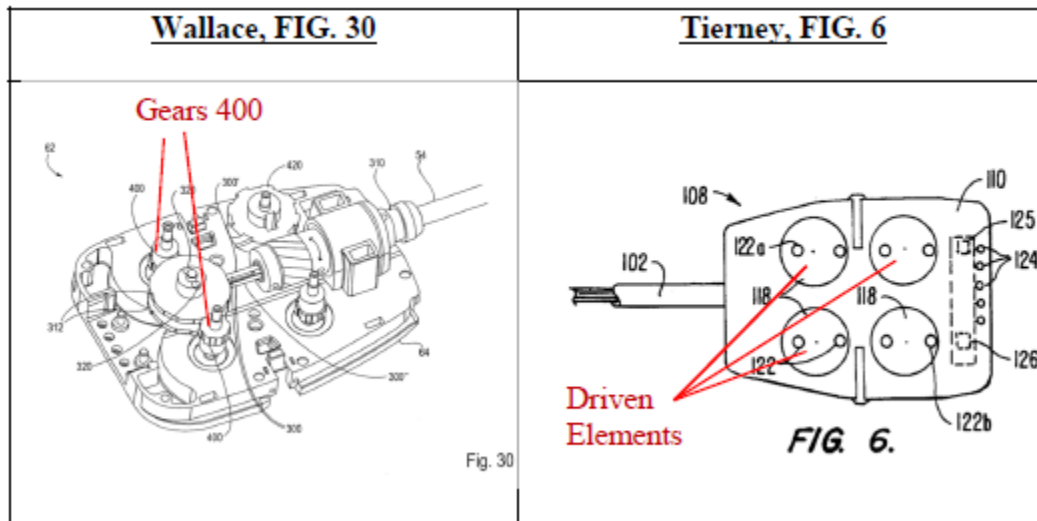


Figure 30, annotated to identify “Gears 400,” depicts Wallace’s gears 400. Figure 6, annotated to identify “Driven Elements”, depicts Tierney’s driven elements 118. Petitioner explains that “Tierney, incorporated by reference, teaches that the gears would be driven by ‘driven elements 118’ on the interface side of the tool base (which are turned by rotatable bodies on the adapter on the robot arm).” Pet. 24 (citing Ex. 1009, 16:41–52). Based on the above, Petitioner takes the position that

[a] POSITA would have readily understood that the Shelton device could be modified for robotic use by removing the handle and triggers and connecting the “second gear rack 142” of Shelton to one of the actuation gears 400 on the Wallace tool base and connecting the “gear rack 100” of Shelton to another one of the actuation gears 400. In the combination, the gear 400 that replaced “gear segment section 76” of Shelton would drive “gear rack 100” to open and close the anvil of the modified stapler. The gear 400 that replaced “gear segment section 156” of Shelton would drive “second gear rack 142” to fire the modified stapler.

Pet. 24–25 (citing Ex. 1005 ¶ 50). Petitioner contends that one of ordinary skill in the art would have been motivated to modify Shelton’s stapler with Wallace’s robotic system for several reasons. See Pet. 25–28.

The preamble of independent claim 1 also includes “[a] tool drive assembly that is operatively coupled to a control unit . . . and is configured to provide at least one rotary output motion to at least one rotatable body portion supported on the tool drive assembly.” Petitioner asserts that “Wallace’s incorporation of Tierney discloses a tool drive assembly (the combination of the tool holder 129 and drive elements 119) that is operatively coupled to a control unit (master control station 150 alone or in combination with robotic arm slave cart 50).” Pet. 28–30 (citing Ex. 1005 ¶¶ 56–57; Ex. 1009, 4:33–35, 7:65–8:7, 10:14–15, 11:5–6, 11:33–35, Figs. 3A, 7J, 8A, 8B, 9; Ex. 1014, 3:12–15). Petitioner provides the following side-by-side reproduction of Figures 7C and 7F of Tierney, annotated to identify, among several items, rotatable bodies 134, adapter 128, and tool holder 129. Pet. 24.

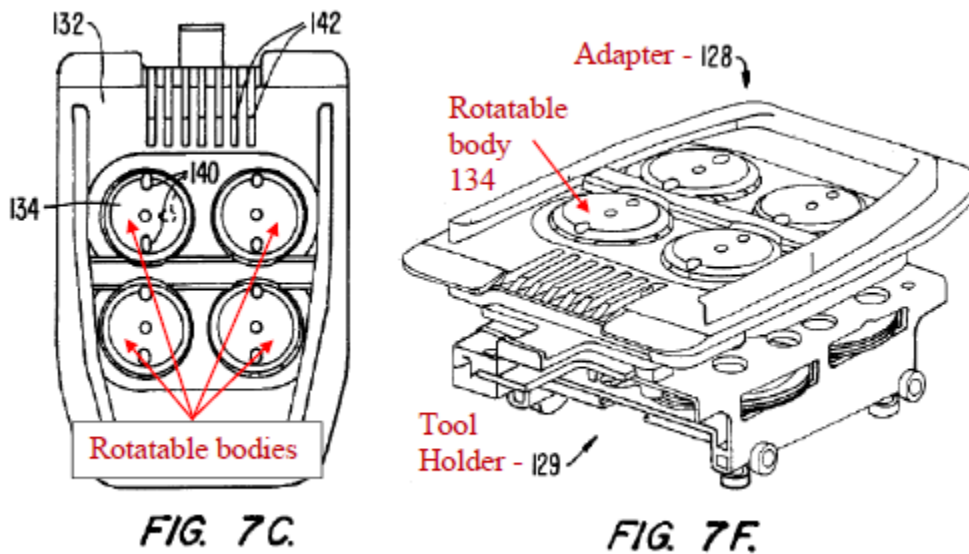


Figure 7C, annotated to identify “Rotatable bodies,” depicts Tierney’s rotatable bodies 134. Figure 7F, annotated to identify “Rotatable bodies 134,” “Adapter 128,” and “Tool Holder 129,” depicts Tierney’s rotatable bodies 134, adapter 128, and tool holder 129. Petitioner explains that

Tierney's tool drive assembly is "also configured to provide at least one rotary output motion to at least one rotatable body portion ('rotatable bodies 134' of adapter 128) supported on the tool drive assembly ('tool holder portion 129')." Pet. 30 (citing Ex. 1005 ¶ 57; Ex. 1009, 10:46–51).

The preamble of independent claim 1 also includes "[a] control unit of the robotic system that is operable by inputs from an operator." Petitioner asserts that Wallace's incorporation of Tierney discloses a control unit that is operable by inputs from an operator. Pet. 30 (citing Ex. 1005 ¶ 58; Ex. 1014, 3:17–25). Thus, Petitioner establishes, by a preponderance of the evidence, that the combined teachings of Giordano/Shelton and Wallace/Tierney discloses the preamble of independent claim 1.

Petitioner also explains how Giordano/Shelton and Wallace/Tierney account for each of: (1) "end effector" (Pet. 31 (citing Ex. 1015, Fig. 1; Ex. 1005 ¶ 59)); (2) "an elongated channel configured to operably support a surgical staple cartridge" (Pet. 31–32 (citing Ex. 1015, 5:40–41, 6:4–6; Ex. 1005 ¶ 60)); (3) "an anvil that is selectively movable between a first open position and second closed positions" (Pet. 32–33 (citing Ex. 1015, 5:37–41, Figs. 1, 2; Ex. 1005 ¶ 61)); (4) "a spine assembly" (Pet. 33 (citing Ex. 1015, 10:39–42, Fig. 11; Ex. 1005 ¶ 63)); (5) "a closure tube assembly movably supported on said spine assembly" (Pet. 34–35 (citing Ex. 1015, 7:58–60, 10:44–48, Figs. 7, 11; Ex. 1005 ¶ 64)); (6) "at least one gear-driven portion, wherein one said gear driven portion is in operable communication with said closure tube assembly" (Pet. 35–36 (citing Ex. 1015, 7:58–62, Fig. 7; Ex. 1005 ¶ 66)); (7) "a tool mounting portion" (Pet. 36–41 (citing Ex. 1008, 7:33–40, Figs. 1, 26–30; Ex. 1009, 9:8–12, 10:12–15, 10:36–41, Figs. 4, 6, 7F, 14C; Ex. 1015, 5:65–66, 7:34–38; Ex. 1005 ¶¶ 67–71)); (8) "a driven

element rotatably supported on said tool mounting portion and configured for driving engagement with a corresponding one of the at least one rotatable body portions of the tool drive assembly to receive corresponding rotary output motions therefrom” (Pet. 41–43 (citing Ex. 1009, 9:19, 10:12–20, 11:3–6, Figs. 6, 7C, 7F, 14C; Ex. 1005 ¶¶ 72–73)); and, finally, (9) “a transmission assembly in operable engagement with said driven element and in meshing engagement with a corresponding one of said at least one gear-driven portions to apply actuation motions thereto to cause said corresponding one of said at least one gear driven portions to apply at least one control motion to said closure tube assembly” (Pet. 43–47 (citing Ex. 1008, 13:66–14:2, Fig. 30; Ex. 1015, 7:5–9:16, Fig. 7; Ex. 1005 ¶¶ 74–78)).

We have reviewed Petitioner’s arguments and the underlying evidence cited in support and are persuaded Petitioner sufficiently establishes that one of ordinary skill in the art “would have recognized that Wallace contemplates use of its robotic surgical system with surgical ‘staplers’” (*id.* at 26 (citing Ex. 1005 ¶¶ 50–55; Ex. 1008, 2:18–21)) and would have been motivated to modify Shelton’s stapler with “Wallace’s robotic system to obtain the benefits of the robotic system.” Pet. 26–27 (citing Ex. 1005 ¶ 53). In addition, Petitioner reasons, and we agree that modification of Shelton’s stapler for use with Wallace’s robotic system would have been “merely the application of a known technique (use of a surgical stapler end effector) to a known system (a surgical robot) ready for improvement to yield predictable results without significantly altering or hindering the functions performed by the Shelton stapler and the Wallace/Tierney robotic system.” Pet. 28 (citing Ex. 1005 ¶ 55).

Petitioner provides similar detailed analysis, supported by the

testimony of Dr. Knodel, for each of claims 2–10. Pet. 47–80; Ex. 1005 ¶¶ 79–116. Notwithstanding Patent Owner’s arguments, which we have considered and which we address below, we are persuaded by Petitioner’s arguments and evidence, discussed above, which we adopt as our own findings and conclusions, and determine that Petitioner establishes by a preponderance of the evidence that claims 1–10 are unpatentable as obvious over the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney).

(2) *Patent Owner’s Contentions*

Patent Owner contends that Petitioner’s ground of unpatentability based on Giordano/Shelton and Wallace/Tierney is deficient. PO Resp. 1–4, 27–42; PO Sur-Reply 14–24. More particularly, Patent Owner argues that one of ordinary skill in the art would not have been motivated to combine the teachings of the cited prior art references because (i) the proposed combination “would result in a loss of tactile feedback for clamping” (PO Resp. 28); (ii) “the handheld endocutters of Giordano and Shelton utilize fundamentally different systems for transferring force to the end effector compared to the robotic systems of Tierney and Wallace” (PO Resp. 35); and (iii) “a POSITA would not have been motivated to remove Wallace’s articulation joint in combining Wallace with Shelton because Wallace teaches that it is desirable to provide robotic surgical tools with three degrees of rotational movement of the end effector around three perpendicular axes.” PO Resp. 42. We address each argument in turn.⁹

⁹ Patent Owner presents no specific argument or evidence specifically directed to claims 2–10. *See generally* PO Resp.

i. “tactile feedback”

Patent Owner asserts that a person of ordinary skill in the art would have been deterred from combining Giordano/Shelton’s “handheld endocutters” with the “robotic surgical systems and tool drives” disclosed in Wallace/Tierney. PO Resp. 27–30; PO Sur-Reply 14–20. Patent Owner asserts that “a POSITA would have known that tactile feedback is critical to an endocutter such as Shelton during the clamping and firing (i.e., cutting and stapling) process.” PO Resp. 27 (footnote omitted) (citing Ex. 2005 ¶ 77; Ex. 2015, 2:62–3:14; Ex. 2016, 7:1–3). Consequently, Patent Owner argues:

Given that the advantages associated with tactile feedback were known to be critical to the user of an endocutter such as Shelton, and robotic systems such as Tierney and Wallace lacked tactile feedback on clamping, a person of ordinary skill in the art would not have been motivated to combine Shelton with Wallace or Tierney as proposed by Petitioner.

PO Resp. 30 (citing Ex. 2005 ¶ 78). We are not persuaded by Patent Owner’s argument.

Instead, we agree with Petitioner that “a POSITA would understand that Wallace (and the combination of Wallace and Tierney) discloses a robotic system with tactile feedback.” Pet. Reply 8 (citing Ex. 1017 ¶¶ 16–17); Pet. Sur-sur-reply 2 n. 1. Here, Petitioner directs us to the Cooper reference, which Wallace unambiguously incorporates by reference. See Pet. Reply 8 (citing Ex. 1008, 3:25–29 (“Robotic surgery systems and methods are further described in co-pending U.S. patent application Ser. No. 08/975,617, filed Nov. 21, 1997, the full disclosure of which is incorporated

herein by reference.”)).¹⁰

Cooper discloses a telerobotic surgical system “for performing telerobotic surgical procedures on a patient while providing the surgeon with the sensation of physical presence at the surgical site.” Ex. 1018, 1:34–36.

More particularly, Cooper discloses:

Position, force, and tactile feedback sensors (not shown) may also be employed to transmit position, force, and tactile sensations from the surgical tools back to the surgeon’s hands as he/she operates the telerobotic system. A monitor is coupled to the viewing scope such that the displayed image of the surgical site is provided adjacent the surgeon’s hands. The image is preferably oriented so that the surgeon feels that he or she is actually looking directly at the operating site. This configuration provides the surgeon with telepresence, or the perception that the input control devices are integral with the surgical tools.

Ex. 1018, 3:43–54; *see also id.* at 5:9–18, 5:46–67, 9:56–66; Ex. 1017

¶¶ 16–17.

Petitioner also directs us to published PCT application W098/25666 (“the ’666 Application”), which Tierney unambiguously incorporates by

¹⁰ The Federal Circuit has deemed similar language as constituting an incorporation by reference. *See Paice LLC v. Ford Motor Co.*, 881 F.3d 894, 907 (Fed. Cir. 2018) (holding the statement “[patent] . . . is incorporated herein by reference” is “broad and unambiguous,” and “identifies with detailed particularity the specific material subject to incorporation,” i.e., the entire patent); *Harari v. Lee*, 656 F.3d 1331, 1335 (Fed. Cir. 2011) (holding the statement “[t]he disclosures of the two [patent] applications are hereby incorporate[d] by reference” is sufficient to incorporate by reference the disclosures of the two patent applications in their entirety).

reference.¹¹ See Pet. Reply 8 (citing Ex. 1009, 1:60–66).¹² The '666 Application “describes a Multicomponent Telepresence System and Method which significantly improves the safety and speed with which robotic surgical tools can be removed and replaced during a surgical procedure.” Ex. 1009, 1:63–66. According to Petitioner, “Tierney’s incorporation by reference of the '666 Application provides the same disclosure” as Cooper (Pet. Reply 8 (citing Ex. 1025, 5:32–35, 8:19–27)), but Petitioner also notes that “the '666 Application describes that “[t]ool 42 will preferably include an end effector 65 having a tactile sensor array (not shown) *for providing tactile feedback to the surgeon.*” Pet. Reply 8 (quoting Ex. 1025, 15:9–12). The '666 Application further discloses that “[d]rive motors 170 will preferably include encoders (not shown) for responding to servomechanism 16 and force sensors (not shown) for transmitting force and torque feedback to the surgeon S.” Ex. 1025, 16:38–17:3.

In response, Patent Owner argues that “Petitioner’s reply evidence fails to support the assertions made by its attorneys regarding the availability of tactile feedback.” PO Sur-reply 15. Patent Owner acknowledges that “Cooper and the '666 Application describe that it would be preferable if a robotic system included the ability to provide tactile feedback to the surgeon” (*id.* at 16 (citing Ex. 1025, 11:33–37)), but Patent Owner argues that “both Cooper and the '666 Application repeatedly state that components

¹¹ The Federal Circuit has deemed similar language as constituting an incorporation by reference. See *Paice*, 881 F.3d at 907.

¹² Tierney states “Published PCT application W098/25666, filed on Dec. 10, 1997 and assigned to the present assignee (the full disclosure of which is incorporated herein by reference).” Ex. 1009, 1:60–63.

required to incorporate a tactile feedback system (e.g., sensors) are not disclosed.” PO Sur-reply 16. Consequently, Patent Owner argues that “Petitioner’s proposed combinations *do not* provide the omitted force or tactile sensors that Cooper and the ’666 Application state are necessary to provide tactile feedback.” *Id.* at 17. We cannot agree.

At the outset, we note that Patent Owner mischaracterizes Cooper and the ’666 Application as not disclosing tactile feedback sensors. *See* PO Sur-reply 16 (“[B]oth Cooper and the ’666 Application repeatedly state that components required to incorporate a tactile feedback system (e.g., sensors) are *not disclosed*” (emphasis added)). Instead, Cooper and the ’666 Application state that the sensors are *not shown*. *See, e.g.*, Ex. 1018 3:39–48 (“[p]osition, force, and tactile feedback sensors (not shown)”; Ex. 1025, 5:32–35 (“[p]osition, force, and tactile feedback sensors (not shown)).” We also note that Patent Owner does not attempt to distinguish the ’969 patent’s disclosure regarding “tactile feedback” from the similar disclosures in Cooper and the ’666 Application.

And, to the extent the ’969 patent does describe “tactile feedback,” i.e., providing the surgeon with an indication, during the clamping and firing process, the ’969 patent identifies doing so with a “pressure sensor.” *See, e.g.*, Ex 1001, 45:59–62; *cf. id.* at 67:29–34. More particularly, the ’969 patent discloses that the “pressure sensor” may, for example, “comprise a spring biased contact switch” or “an off switch that contacts only at a known desired load.” *Id.* at 45:62–67; *see also id.* at 17:6–21 (“The instrument 10 may include a number of sensor transponders in the end effector 12 for sensing various conditions related to the end effector 12.”). In this regard, we note that similar to the ’969 patent, Giordano discloses a number of

sensors, including a pressure sensor in its end effector for sensing “the progress of the stapler during closure and firing.” Ex. 1014 ¶¶ 56–57. Thus, Patent Owner’s argument that “Petitioner’s proposed combinations *do not* provide the omitted force or tactile sensors that Cooper and the ’666 Application state are necessary to provide tactile feedback” is not persuasive. PO Sur-reply 17. Accordingly, Patent Owner’s argument that a person of ordinary skill in the art would have been deterred from combining Giordano/Shelton with Wallace/Tierney because “[a] POSITA would have known that tactile feedback is critical” to the “the clamping and firing (i.e., cutting and stapling) process” is not persuasive.

ii. *clamping force*

Patent Owner argues that Petitioner fails to demonstrate that one of ordinary skill in the art would have been motivated to combine the teachings of the cited prior art references with a reasonable expectation of success. PO Resp. 31–41; PO Sur-Reply 20–24. To support its argument, Patent Owner asserts:

The handheld endocutters of Giordano and Shelton utilize fundamentally different systems for transferring force to the end effector compared to the robotic systems of Tierney and Wallace. Ex. 2005, ¶ 99. As shown in the figure below from Shelton, for example, the closure trigger 26 pivots a short distance at a low speed when actuated by the surgeon to close the end effector jaws. Ex. 1015 at 5:37–41 (“The handle portion 20 includes a pistol grip 24 toward which a closure trigger 26 is pivotally drawn by the clinician to cause clamping, or closing, of the anvil 18 toward the elongate channel 16 of the end effector 12.”). This motion generates a high torque at a relatively low speed. Ex. 2005, ¶ 99.

PO Resp. 35. In contrast, Patent Owner asserts that “the robotic instruments in Tierney and Wallace are actuated by small electric motors, which are

generally understood to generate low torque at relatively high speeds, especially in the case of motors sized to fit within the footprint of a robotic surgical system.” *Id.* at 36 (citing Ex. 2005 ¶ 100). Consequently, Patent Owner argues that “[g]iven the differences in how force is generated and transferred in robotic systems relative to handheld systems, a POSITA would not have had a reasonable expectation of success in adapting the Giordano or Shelton instruments for use with a robotic system such as Tierney or Wallace.” PO Resp. 37.

In response, Petitioner asserts that the ’969 patent is silent as to any particular gear size, and instead “assumes a POSITA *would know how to choose the right gears* to generate the required force.” Pet. Reply 20–21 (citing Ex. 1019, 116:8–119:1; Ex. 1023, 27:8–31:14; Ex. 1005 ¶¶ 50–55). Petitioner explains that it was well-known in the prior art that “there are numerous mechanisms available to provide for added mechanical advantage as necessary—e.g., gears that are used to reduce speed and increase torque.” Pet. Reply 20.

We are persuaded Petitioner sufficiently establishes that one of ordinary skill in the art would have recognized that the rotary outputs in the Wallace/Tierney robotic system could be readily coupled to the rotary inputs in the Giordano/Shelton surgical stapler “because a POSITA would [have] know[n] how to couple a rotary output to a rotary input” with a reasonable expectation of success at the time of the invention. Pet. Reply 18 (citing Ex. 1005 ¶¶ 50, 52, 80, 121). In making this determination, we note that both Giordano and Shelton contemplate their handheld endocutters being adapted for use in remote/robotic surgery. See Ex. 1014 ¶ 88 (stating “[t]he present invention also has application in . . . robotic-assisted surgery”); see also Ex.

1015, 12:45–53 (stating “controls of [some or all the] functions may be manually presented on a handle portion or be remotely controlled (e.g., wireless remote, automated remote console, etc.)”). We also note that Shelton discloses that its “closing and firing motions may be generated by automated means.” Ex. 1015, 9:47–50. Given the disclosures of Giordano and Shelton, we credit Dr. Knodel’s testimony that one of ordinary skill in the art would have been “well versed in connecting a rotary drive with a rotary driven element using well-known mechanical connections, such as those disclosed in the various references themselves, including meshing gears or linkages.” Ex. 1005 ¶ 52. We also agree with Dr. Knodel that Shelton’s use of the term “[a]utomated means” suggests some sort of robotic control and therefore such a statement would direct one of ordinary skill in the art to Wallace.” *Id.* ¶ 54.

Patent Owner asserts that Petitioner’s expert, Dr. Knodel, “admitted that the tool base shown in Wallace’s figures is not designed to drive an endocutter that clamps and fires.” PO Resp. 36–37 (citing Ex. 2011, 24:20–23). This admission deserves little weight, however, given that Wallace expressly discloses that “any suitable end effector 66 may be used” in its robotic surgery system depending on the surgical need, including clamps and staplers. Ex. 1008, 7:50–56; *see also id.* at 2:18–21 (“As used herein, the term ‘end effector’ means the actual working part of the surgical instrument and can include clamps, graspers, scissors, staplers, and needle holders, for example.”); Pet. Reply 18–20; *see Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1364 (Fed. Cir. 2007) (Obviousness “cannot be avoided simply by a showing of some degree of unpredictability in the art so long as there was a reasonable probability of success.”).

iii. *removing Wallace's articulation joint*

Patent Owner also argues that one of ordinary skill in the art would not have been motivated to combine the teachings of the cited prior art references because

a POSITA would not have been motivated to remove Wallace's articulation joint in combining Wallace with Shelton because Wallace teaches that it is desirable to provide robotic surgical tools with three degrees of rotational movement of the end effector around three perpendicular axes, i.e., three-dimensional articulation, in order to more accurately mimic the natural movements of a surgeon's wrist. Ex. 1008, 2:61–65.

PO Resp. 42. With respect to claims 1–10, however, we are not persuaded that modifying the endocutter of Giordano/Shelton with the robotic surgical systems and tool drives disclosed in Wallace/Tierney requires importing or removing Wallace's articulation joint. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.”). Thus, we agree with Petitioner that “a POSITA would have modified Shelton's stapler for use with Wallace's robotic system to obtain the benefits of robotic-assisted surgery.” Pet. Reply 26 (citing Pet. 26–27). We also note that Tierney, which Wallace unambiguously incorporates by reference, describes that its robotic surgical system may utilize both “articulated” and “non-articulated” surgical tools. Ex. 1009, 6:20–28.

(3) *Conclusion*

We have considered the entirety of the evidence submitted by the parties, and determine that Petitioner has shown, by a preponderance of the

evidence, that claims 1–10 of the '969 patent would have been obvious to one of ordinary skill in the art over the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney).

b) Dependent claim 11

(1) Petitioner's Contentions

Dependent claim 11 recites:

[t]he surgical tool of claim 1 wherein said elongated shaft assembly defines a longitudinal tool axis and further comprises an articulation joint therein that facilitates selective articulation of said surgical end effector about an articulation axis that is substantially transverse to said longitudinal tool axis.

Ex. 1001, 90:21–26.

Petitioner asserts that “Giordano in view of Wallace discloses this element.” Pet. 81 (citing Ex. 1005 ¶¶ 117–121). Petitioner asserts that “the elongated shaft assembly of the Shelton stapler defines a longitudinal tool axis,” but acknowledges that “it does not include an articulation joint.” Pet. 81. To address this deficiency, Petitioner proposes modifying the elongated shaft assembly of Shelton’s stapler to include “‘Giordano’s articulation mechanism’ that includes, among other things, an articulation control 16 and an articulation pivot 14.” Pet. 81 (citing Ex. 1014 ¶ 35, Fig. 2; Ex. 1005 ¶ 117).¹³

Petitioner contends that

[a] POSITA would have been motivated to add Giordano’s

¹³ The parties refer to this ground as the “primary combination,” and so do we.

articulation mechanism to the Shelton stapler because Giordano teaches that “[c]orrect placement and orientation of the end effector 12 may be facilitated by controls on the hand[le] 6, including . . . an articulation control 16 to effect rotational articulation of the end effector 12 about the articulation pivot 14.”

Pet. 83 (citing Ex. 1014 ¶ 34). Petitioner further reasons:

A POSITA would have been further prompted to modify the Shelton stapler for use with Giordano’s articulation mechanism because doing so would be merely the application of a known technique (use of an articulation mechanism) to a known system (a surgical stapler) ready for improvement to yield predictable results without significantly altering or hindering the functions performed by the Shelton stapler. [Ex.]1005, ¶ 120; *KSR*, 550 U.S. at 417.

Pet. 84. According to Petitioner

[i]n the combination, a POSITA would have understood that the firing bar in Shelton is thin and thus bendable about the vertical axis and thus can travel through an articulation joint. Alternatively, a POSITA would have understood that the firing mechanism of Giordano (using coupled proximal and distal shafts), which is designed to work through an articulation joint, could be used in place of Shelton’s firing bar.

Pet. 84 (citing Ex. 1005 ¶ 120). Petitioner concludes that “it would have been obvious, in view of Wallace, to adapt the resulting device (i.e., the Shelton stapler with Giordano’s articulation mechanism) for use with a surgical robotic system for the same reasons it would have been obvious to modify the Shelton stapler for use with a robotic system.” Pet. 84 (citing Pet. 21–31).

Additionally, instead of relying on Giordano’s “articulation mechanism” to address the articulation joint required by dependent claim 11, Petitioner alternatively asserts that “it would have been obvious to modify Shelton’s stapler to add an articulation joint as claimed in view of Wallace,

which is directed to an improved articulation mechanism (called a ‘wrist mechanism’) for surgical instruments.” Pet. 85 (citing Ex. 1008, codes (54), (57)).¹⁴ To support its position, Petitioner asserts that “Wallace teaches that ‘it is desirable to provide surgical tools which include mechanisms to provide three degrees of rotational movement of an end effector around three perpendicular axes to mimic the natural action of a surgeon’s wrist.’” Pet. 85 (citing Ex. 1008, 2:62–65). According to Petitioner, one of ordinary skill in the art would have been motivated to improve “Giordano’s disclosure of movement along a single axis” using Wallace’s disclosure regarding “an articulation mechanism using gear-driven articulation rods allowing multi-axis 360 degree movement.” Pet. 85 (citing Ex. 1008, 8:50–61).

(2) Patent Owner’s Contentions

Patent Owner contends that Petitioner’s ground of unpatentability based on Giordano/Shelton and Wallace/Tierney is deficient. PO Resp. 1–4, 17–41; PO Sur-Reply 1–24. With respect to Petitioner’s “primary combination,” Patent Owner argues (i) “a POSITA would have been deterred from combining Giordano’s articulation mechanism with Wallace because it would result in a device that has fewer degrees of movement and an articulation control located on the instrument shaft.” PO Resp. 3; PO Sur-reply 7–14. With respect to Petitioner’s “alternative combination,” Patent Owner argues that (ii) “Shelton’s firing mechanism is incompatible with Wallace’s wrist mechanism.” PO Resp. 23. We address each argument in turn.

¹⁴ The parties refer to this ground as the “alternative combination,” and so do we.

i. primary combination

With respect to Petitioner's primary combination, Patent Owner argues that

a POSITA would have been deterred from combining Giordano's articulation mechanism with Wallace because it would result in a device that has fewer degrees of movement and an articulation control located on the instrument shaft. Such a device is contrary to the intended purpose of Wallace, which is to provide more degrees of movement and remote operation of an instrument.

PO Reply 3.

In response, Petitioner argues that Patent Owner's argument "that a POSITA would . . . keep Giordano's manual articulation knob on the instrument's shaft when adapting it for use with Wallace" is "baseless and does not reflect Petitioner's primary combination." Pet. Reply 11 (citing PO Resp. 31). Instead, Petitioner asserts that "all control functions are handled by Wallace's robotic system as taught by Wallace," and as such, all of the control would be controlled remotely. Pet. Reply 11. We do not agree.

Instead, we agree with Patent Owner that "it is clear that the primary combination, as set forth in the Petition, did not include any modification to Giordano's articulation control 16 to relocate its functions into Wallace's tool mounting portion." PO Sur-reply 12. In making this determination, we agree with Patent Owner that the Petition and Dr. Knodel only assert moving certain specific components from the Shelton/Giordano endocutters into Wallace's robotic tool base, as discussed in greater detail below. PO Sur-reply 7–14.

For example, with reference to pages 24–26 of the Petition and paragraphs 50–55 of Dr. Knodel's declaration, Patent Owner first points out

that Petitioner “argue[s] for certain specific components – Shelton’s second gear rack 142 and gear rack 100 – to be moved from the device handle to Wallace’s robotic tool base.” PO Sur-reply 8. Upon further inspection, Petitioner explains:

In the combination, the gear 400 that replaced “gear segment section 76” of Shelton would drive “gear rack 100” to open and close the anvil of the modified stapler. The gear 400 that replaced “gear segment section 156” of Shelton would drive “second gear rack 142” to fire the modified stapler.

Pet. 25 (citing Ex. 1005 ¶ 50).

Similarly, with reference to pages 47–49 of the Petition and paragraph 80 of Dr. Knodel’s declaration, Patent Owner points out that Petitioner “argue[s] for a specific component – Shelton’s rotation knob 60 – to be replaced by a helical tube gear on the robotic tool mounting portion.” PO Sur-reply 10. Here, Petitioner explains:

In Shelton, the rotational knob is manually operated by the user. However, in the combination of Giordano (incorporating Shelton) and Wallace, the manually operated rotational knob would be replaced by the tube gear of Wallace to rotate the elongated shaft assembly (including closure tube). It would have been obvious to a POSITA in view of Wallace to replace manually operated knob 60 with a gear driven tube gear rotated by the transmission assembly of the robotic system.

Pet. 48 (citing Ex. 1005 ¶ 80).

In contrast, with reference to pages 81–84 and paragraph 121 of Dr. Knodel’s declaration, Patent Owner points out that Petitioner simply “state[s] that the combination consists of ‘the Shelton stapler for use with Giordano’s articulation mechanism.’” PO Sur-reply 11. To address the articulation joint, Petitioner asserts that “Giordano discloses an articulation mechanism (‘Giordano’s articulation mechanism’) that includes, among

other things, an articulation control 16 and an articulation pivot 14.” Pet. 81 (citing Ex. 1014 ¶ 35, Fig. 2; Ex. 1005 ¶ 117). Petitioner contends that a POSITA would have been motivated to add Giordano’s articulation mechanism to the Shelton stapler for several reasons. Pet. 83–84 (citing Ex. 1005 ¶¶ 119–120). Petitioner then simply concludes that “it would have been obvious, in view of Wallace, to adapt the resulting device (i.e., the Shelton stapler with Giordano’s articulation mechanism) for use with a surgical robotic system for the same reasons it would have been obvious to modify the Shelton stapler for use with a robotic system.” Pet. 84 (citing Pet. 21–31).

The difficulty with Petitioner’s proposed combination is that Petitioner does not explain adequately how one of ordinary skill in the art would modify the Shelton stapler with Giordano’s articulation mechanism to operate with Wallace’s robotic system. Giordano’s articulation mechanism uses a shaft-mounted articulation control 16 to operate its articulation joint, which is located separate and apart from Giordano’s handle 6. Ex. 1014 ¶¶ 34–35, Fig. 2. As such, we find Petitioner’s reliance “on the same reasons it would have been obvious to modify the Shelton stapler for use with a robotic system” (Pet. 84 (citing Pet. 21–31)) inadequate to address the Shelton stapler along with Giordano’s articulation mechanism for use in Wallace’s surgical robotic system. *See, e.g.*, Pet. 24–25 (“A POSITA would have readily understood that the Shelton device could be modified for robotic use by removing the handle and triggers . . .”). Thus, we agree with Patent Owner that “neither the Petition nor Dr. Knodel ever refers to any modification of Giordano’s articulation control 16 to be replaced by some other component in the tool mounting portion, as Petitioner did with

Shelton’s rotational knob 60, gear rack 100, and second gear rack 142.” PO Sur-reply 12 (citing Pet. 84; Ex. 1005 ¶ 121); *see also* PO Sur-reply 8–10 (citing Pet. 25–26, 47–49; Ex. 1005 ¶¶ 50–55, 80).

ii. “*alternative combination*”

Turning to Petitioner’s alternative combination, Patent Owner argues that combining Shelton’s endocutter with Wallace’s wrist mechanism would have resulted in an inoperable device because Shelton’s firing mechanism is incompatible with Wallace’s wrist. PO Resp. 23. Patent Owner asserts that Shelton’s endocutter does not have an articulation joint, and as such, “a POSITA would not have made this proposed combination because Shelton’s firing bar is not designed to be twisted in multiple axes as would be required with Wallace’s wrist.” PO Resp. 2.

In response, Petitioner argues that “[t]he claims at issue do not require more than one articulation axis,” and as such, “there would have been no need for Shelton’s firing bar to articulate in multiple axes” when combined with Wallace’s articulation joint. Pet. Reply 12–13. To support its position, Petitioner argues that “even when making the alternative combination of Shelton’s stapler with Wallace’s articulation mechanism, a POSITA would have been motivated to use only one axis of articulation given that Shelton’s firing bar can articulate only in a single axis.” *Id.* at 13 (citing Ex. 1024, 84:18–85:4). Petitioner’s argument is not persuasive.

At the outset, we note that Petitioner’s “one axis” argument is a new theory that was not made as a proper response to Patent Owner’s arguments. “It is of the utmost importance that petitioners in the [*inter partes* review] proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the ground for the challenge to each

claim.”” *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (quoting 35 U.S.C. § 312(a)(3)). Accordingly, we decline to consider the merits of Petitioner’s Reply argument that one of ordinary skill in the art would have been motivated to use Wallace’s articulation mechanism for “only one axis of articulation given that Shelton’s firing bar can articulate only in a single axis.” Pet. Reply 13; 37 C.F.R. § 42.23(b) and Consolidated Trial Practice Guide 74–75.

However, even if we were satisfied that Petitioner had presented this argument in a timely manner, we agree with Patent Owner that “it is unsupported by any motivation to combine.” PO Sur-reply 14. As Patent Owner points out, “the *sole motivation* that Petitioner presented for combining Shelton’s endocutter with Wallace’s articulation mechanism was the benefit of having multi-axis articulation.” *Id.* (citing Pet. 85). Thus, Petitioner’s new theory that “a POSITA would have been motivated to use only one axis of articulation given that Shelton’s firing bar can articulate only in a single axis” (Pet. Reply 13) is inconsistent with Petitioner’s original theory, which was to “improve[] upon Giordano’s disclosure of movement along a single axis” by utilizing Wallace’s articulation mechanism, which “provide[s] three degrees of rotational movement of an end effector around three perpendicular axes to mimic the natural action of a surgeon’s wrist.” Pet. 85 (citing Ex. 1008, 2:62–65).

Additionally, Petitioner argues that “a POSITA would understand that Shelton’s firing bar can articulate.” Pet. Reply 14. In the Petition, Petitioner made a similar argument, i.e., “a POSITA would have understood that the firing bar in Shelton is thin and thus bendable about the vertical axis and thus can travel through an articulation joint.” Pet. 84. In its Reply,

Petitioner states that

[a]s explained in the Petition, Giordano (which incorporates Shelton by reference) also incorporates Hueil by reference. Petition, 95. Thus, Giordano specifically discloses a firing bar that is nearly identical to Shelton's, which is made from either a solid material or a laminate and bends around an articulation joint.

Pet. Reply 14 (citing Pet. 93–95). Here, it is unclear as to whether Petitioner is asserting that one of ordinary skill in the art would understand that Shelton's firing bar can articulate, i.e., bend “around three perpendicular axes,” as set forth in the Petition (see Pet. 85) or around “a single axis,” as set forth in Petitioner's Reply (Pet. Reply 13). Under either theory, however, we agree with Patent Owner that Petitioner's assertion is conclusory and unsupported. PO Resp. 24. We also agree with Patent Owner that even if “Shelton's firing bar is bendable around a single axis, it does not demonstrate that it is bendable around two independent axes, as would be required if Shelton were combined with Wallace's articulation joint.” *Id.* at 24–25 (citing Ex. 2005 ¶ 91). Petitioner proffers no support from its expert, Dr. Knodel, to support its argument that Shelton's firing bar can articulate or bend around an articulation joint. *See, e.g.*, Ex. 1005 ¶¶ 117–121, 127. Petitioner's argument is mere attorney argument, which is unsupported by factual evidence. Mere attorney arguments and conclusory statements that are unsupported by factual evidence have little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984).

(3) Conclusion

We have considered the entirety of the evidence submitted by the parties, and determine that Petitioner has not shown, by a preponderance of

the evidence, that claim 11 of the '969 patent would have been obvious to one of ordinary skill in the art over the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney).

c) Independent claim 24

(1) Petitioner's Contentions

Independent claim 24 recites in part:

a proximal spine portion pivotally coupled to said distal spine portion at an articulation joint to facilitate articulation of said surgical end effector about an articulation axis that is substantially transverse to said longitudinal tool axis.

Ex. 1001, 95:50–54. Petitioner provides a detailed mapping of independent claim 24. *See* Pet. 85–90. As for the “articulation limitation”¹⁵ recited by independent claim 24, and reproduced above, Petitioner relies on its mapping and analysis as set forth for dependent claim 11. *See* Pet. 87–88 (citing Pet. 80–85 (stating “*See* Ground 1, claim [11]”); *see also* Ex. 1005 ¶ 127 (stating “*See above*, claim [11]”).

(2) Patent Owner's Contentions

Patent Owner contends that Petitioner's ground of unpatentability challenging claim 24 based on Giordano/Shelton and Wallace/Tierney is deficient for the same reasons as discussed above with respect to dependent claim 11. PO Resp. 1–4, 17–41; PO Sur-Reply 1–24.

¹⁵ In the Petition, Petitioner refers to the “articulation limitation” as limitation “[24.2.2].” Pet. 87–88.

(3) *Conclusion*

We have considered the entirety of the evidence submitted by the parties, and determine that Petitioner has not shown, by a preponderance of the evidence, that independent claim 24 of the '969 patent would have been obvious to one of ordinary skill in the art over the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney).¹⁶

E. Grounds 2–4

With respect to Ground 2, Petitioner contends that “[i]f Wallace is deemed not to disclose the Tierney subject matter incorporated by reference, it would have been obvious to combine Wallace and Tierney to arrive at the same subject matter.” Pet 90. With respect to Ground 3, Petitioner contends that

[i]f Wallace is deemed not to disclose the Tierney subject matter by reference, and Giordano is deemed not to disclose the Shelton subject matter by reference, then claims 1–6 and 9–10 would have been obvious over Shelton in view of Wallace and Tierney for the reasons explained above.

¹⁶ Given that Petitioner has not shown, by a preponderance of the evidence, that the combined teachings of Giordano (which incorporates by reference the prior art surgical stapler of Shelton) and Wallace (which incorporates by reference the details of the surgical tool disclosed in Tierney) disclose or suggest the “articulation limitation,” as required by independent claim 24 (see Pet. 87–88), we determine that it is unnecessary to address the parties’ arguments related to the Certificate of Correction (see Ex. 1002, 686), mailed January 23, 2018, as it pertains to a term in independent claim 24 that is distinct from the “articulation limitation.” PO Resp. 17; Pet. Reply 1–5; PO Sur-reply 1, 3–7.

Pet. 91. With respect to Ground 4, Petitioner contends that

[i]f Wallace is deemed not to disclose the Tierney subject matter by reference, and Giordano is deemed not to disclose the Shelton subject matter by reference, then claims 7, 8, 11, and 24 would have been obvious over Shelton in view of Giordano and then further in view of Wallace and Tierney for the reasons explained above.

Pet. 92.

Patent Owner does not dispute that Giordano incorporates Shelton's teachings by reference or that Wallace incorporates Tierney's teachings by reference. Further, we agree with Petitioner that Giordano unambiguously incorporates Shelton by reference (*see* Ex. 1014 ¶ 39 ("U.S. Pat. No. 6,978,921, entitled 'Surgical stapling instrument incorporating an E-beam firing mechanism,' which is incorporated herein by reference, provides more details about such two-stroke cutting and fastening instruments.")) and Wallace unambiguously incorporates Tierney by reference (*see* Ex. 1008, 1:10–18 ("This application is related to [U.S. patent application Ser. No. 09/418,726, entitled 'Surgical Robotic Tools, Data Architecture, and Use', filed on Oct. 15, 1999], the full disclosure[] of which [is] incorporated herein by reference")). The Federal Circuit has deemed similar language as constituting an incorporation by reference. *See Paice*, 881 F.3d at 907; *Harari v. Lee*, 656 F.3d 1331, 1335 (Fed. Cir. 2011). Accordingly, we conclude that Shelton's disclosure is part of Giordano's disclosure and Tierney's disclosure is part of Wallace's disclosure.

Patent Owner presents no specific argument or evidence specifically directed to Grounds 2–4. *See generally* PO Resp. 1–4, 17–43; PO Sur-reply 1–24. Instead, Patent Owner addresses the Giordano/Shelton and Wallace/Tierney references together with respect to Ground 1.

We have reviewed Petitioner’s arguments and the underlying evidence cited in support of Grounds 2–4 (Pet. 90–92), and for the reasons discussed above with respect to Ground 1, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 1–10 would have been obvious over Giordano, Wallace, and Tierney (Ground 2), claims 1–6 and 9–10 would have been obvious over Shelton, Wallace, and Tierney (Ground 3), and claims 7 and 8 would have been obvious over Shelton, Giordano, Wallace, and Tierney (Ground 4).

However, as discussed above, we determine that Petitioner has failed to make the requisite showing regarding claims 11 and 24. We note that Grounds 2 and 4 do not provide additional persuasive evidence that was not already considered with respect to Ground 1. Accordingly, we are not persuaded that Petitioner has shown, by a preponderance of the evidence, that claims 11 and 24 would have been obvious over Giordano, Wallace, and Tierney (Ground 2) and claims 11 and 24 would have been obvious over Shelton, Giordano, Wallace, and Tierney (Ground 4).

F. Ground 5: Claims 5 and 6 – Obvious over Shelton, Wallace, Tierney, and Hueil

Petitioner contends that claims 5 and 6 would have been obvious over Shelton, Wallace, Tierney, and Hueil. Pet. 93–94; Ex. 1005 ¶¶ 141–144.

1. Overview of Hueil

Hueil is titled “Surgical Instrument Having an Articulating End Effector.” Ex. 1016, code (54). Hueil’s Abstract reads as follows:

An articulating surgical instrument is shown, which comprises a shaft and an end effector. The shaft has a longitudinal axis, and the end effector is operationally coupled, preferably mechanically coupled, to the shaft at an articulation pivot. The

instrument also comprises a first band, and in some embodiments, a second band, each operationally connected to the end effector and extending through at least a portion of the shaft. An articulation control applies a force in a direction substantially transverse to the longitudinal axis, wherein the force, when applied in one direction, is translated through the first band to the end effector to effect rotation of the end effector relative to the shaft about the articulation pivot in a first rotational direction, and when the force is applied in the opposite direction, is translated through the second band to the end effector to effect rotation of the end effector relative to the shaft about the articulation pivot in a second rotational direction.

Id. at code (57).

2. *Petitioner's Contentions*

Claim 5 recites, *inter alia*, “a knife bar that is movably supported within said elongated shaft assembly for selective axial travel therein, said knife bar interfacing with said cutting instrument and said transmission assembly.” Claim 6 further depends from claim 5. Petitioner asserts that “Shelton discloses a knife bar with an integrated cutting instrument.” Pet. 93 (citing Ex. 1015, Fig. 3); Pet. 55–60; *see also* Ex. 1005 ¶ 91 (stating “when the Shelton stapler is combined with Wallace’s robotic system, movement of the tool drive assembly would cause the reciprocation of the metal drive rod 140.”). However, Petitioner asserts that in the event the knife bar and cutting instrument are viewed to be separate components, it would have been obvious to use separate components based on the teachings of Hueil. Pet. 93–94 (citing Ex. 1016 ¶¶ 10–11, 68–69); *see also* Ex. 1005 ¶¶ 142–143.

Patent Owner does not address Ground 5 or dependent claims 5 and 6 expressly. *See generally* PO Resp. 1–4, 17–43; PO Sur-reply 1–24. We have reviewed Petitioner’s arguments and the underlying evidence cited in

support and are persuaded that Petitioner establishes, by a preponderance of the evidence, that claims 5 and 6 would have been obvious over the combined teachings of Shelton, Wallace, Tierney, and Hueil.

IV. MOTION TO SEAL

On August 19, 2019, Patent Owner filed redacted and unredacted versions of its Sur-reply (Papers 26 and 27) and redacted and unredacted versions of Exhibit 2026, along with a Motion to Seal (Paper 25). The Motion also seeks entry of a stipulated protective order that deviates from our standard protective order in several respects. Paper 25, 1 (citing Attachment 1). In the Motion, Patent Owner asserts that “Exhibit 2026 includes excerpts of deposition testimony from the co-pending litigation between Patent Owner and Petitioner,” but does not explain why Exhibit 2026 warrants sealing. Paper 25, 2–3. Patent Owner further asserts that “Patent Owner’s sur-reply refers to Ex. 2026,” but again does not explain why “discussion of Ex. 2026 might warrant sealing portions of Patent Owner’s sur-reply.” *Id.* at 3.

There is a strong public policy that favors making information filed in *inter partes* review proceedings open to the public. *See Garmin Int’l v. Cuozzo Speed Techs., LLC*, IPR2012-00001, Paper 34 (PTAB Mar. 14, 2013) (discussing the standards of the Board applied to motions to seal). Nevertheless, the Board may issue an order protecting confidential information from public disclosure if the moving party demonstrates good cause for doing so. *See* 37 C.F.R. § 42.54 (requiring good cause to seal confidential information); *see also* 37 C.F.R. § 42.20(c) (burden of proof rests with the moving party).

Based on our review of the record and Patent Owner’s Motion, we

deny Patent Owner's Motion to Seal with respect to Exhibit 2026 because Patent Owner has not provided any reason or rationale as to why the deposition of Patrick Flanagan (Ex. 2026) is confidential. Although Patent Owner indicates that "Petitioner is in the best position to explain why it believes the documents are and should remain confidential" (Paper 25, 1 n.1), Petitioner has not moved on its own accord to seal Exhibit 2026, and has offered no explanation as to why its contents should remain confidential. We also deny Patent Owner's Motion to Seal with respect to Patent Owner's Sur-reply (Paper 27), which quotes portions of Exhibit 2026 for this same reason.

Accordingly, we deny the Motion to Seal Patent Owner's Sur-reply and Exhibit 2026, and as such, the designation of Paper 27 (PO Sur-Reply) and Exhibit 2026 as for "Parties and Board Only" should be removed.

V. CONCLUSION¹⁷

For the foregoing reasons, we determine the following:

Claims	35 U.S.C. §	References	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–11, 24	§ 103	Giordano, Wallace	1–10	11, 24
1–11, 24	§ 103	Giordano, Wallace, Tierney	1–10	11, 24
1–6, 9–10	§ 103	Shelton, Wallace, Tierney	1–6, 9–10	
7, 8, 11, 24	§ 103	Shelton, Giordano, Wallace, Tierney	7, 8	11, 24

¹⁷ 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*. See 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).

5, 6	§ 103	Shelton, Wallace, Tierney, Hueil	5, 6	
Overall Outcome			1–10	11, 24

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–10 of the '969 patent are unpatentable;

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 11 and 24 are unpatentable; and

FURTHER ORDERED that Patent Owner's Motion to Seal (Paper 25) is DENIED; and

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

IPR2018-01254
Patent 8,479,969 B2

PETITIONER:

Steven R. Katz
John C. Phillips
Ryan P. O'Connor
FISH & RICHARDSON P.C.
katz@fr.com
phillips@fr.com
oconnor@fr.com

PATENT OWNER:

Anish R. Desai
Elizabeth Stotland Weiswasser
Adrian Percer
Christopher T. Marando
Christopher M. Pepe
WEIL, GOTSHAL & MANGES LLP
anish.desai@weil.com
elizabeth.weiswasser@weil.com
adrian.percer@weil.com
christopher.marando@weil.com
christopher.pepe@weil.com