

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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Case IPR2018-00936  
Patent 9,585,658 B2

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

COCKS, *Administrative Patent Judge*.

DECISION  
Institution of *Inter Partes* Review  
35 U.S.C. § 314

## I. INTRODUCTION

Intuitive Surgical, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–14 of U.S. Patent No. 9,585,658 B2 (Ex. 1001, “the ’658 patent”). Ethicon LLC (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”) to the Petition. We have authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Moreover, a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

Upon consideration of the Petition and the Preliminary Response, we conclude that the information presented shows there is a reasonable likelihood that Petitioner would prevail in showing the unpatentability of at least one challenged claim. Accordingly, we authorize an *inter partes* review to be instituted as to claims 1–14 of the ’658 patent on the grounds raised in the Petition. Our factual findings and conclusions at this stage of the proceeding are based on the evidentiary record developed thus far (prior to Patent Owner’s Response). This is not a final decision as to patentability of claims for which *inter partes* review is instituted. Any final decision will be based on the record, as fully developed during trial.

## II. BACKGROUND

### A. The ’658 Patent

The ’658 patent is titled “Stapling Systems,” and relates “to surgical staplers having an end effector closing system and a firing system deploying

staples.” Ex. 1001, [54]; 1:50–53. The ’658 patent describes that its stapling system comprises:

a housing comprising a rotary drive member, an elongate shaft extending from the housing, wherein the elongate shaft defines a longitudinal axis, and an end effector comprising a jaw configured to support a staple cartridge and an anvil rotatable relative to the jaw between an open position and a fully-closed position, wherein the anvil comprises a cam surface.

*Id.* at [57].

Figure 1 of the ’658 patent is reproduced below:

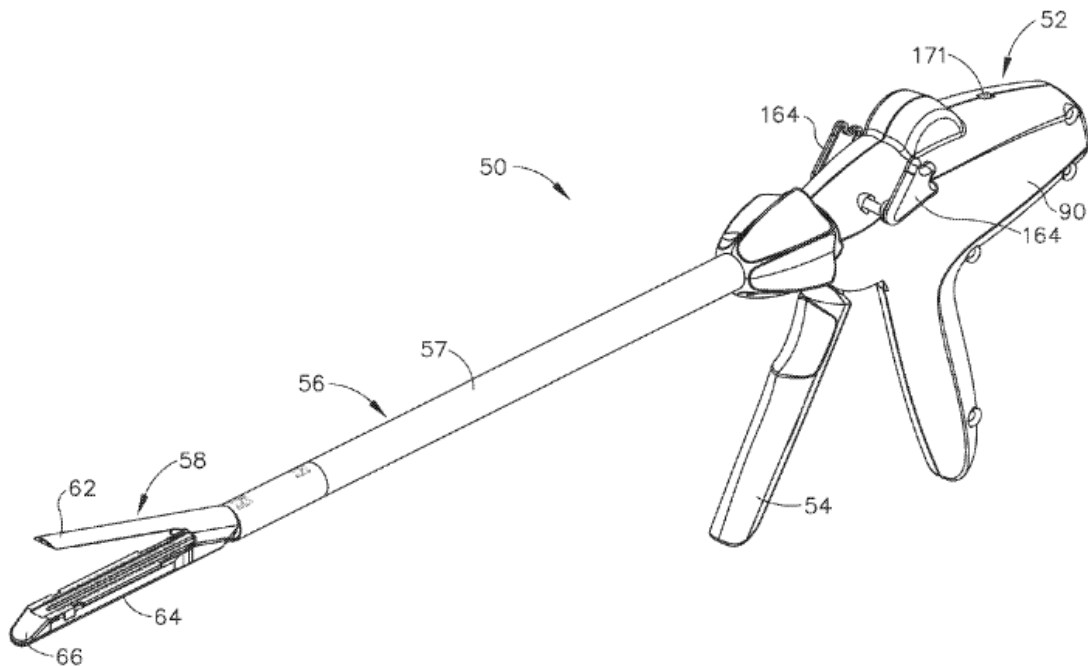


FIG. 1

Figure 1 shows “a perspective view of a surgical instrument in accordance with an embodiment of the present invention.” *Id.* at 3:36–37. As shown in Figure 1, surgical instrument 50 includes handle portion 52, trigger 54, elongate shaft assembly 56, and end-effector 58. *Id.* at 11:52–54. End effector 68 includes anvil 62 and staple cartridge channel 64. *Id.* at 11:54–55. Figure 38 is reproduced below.

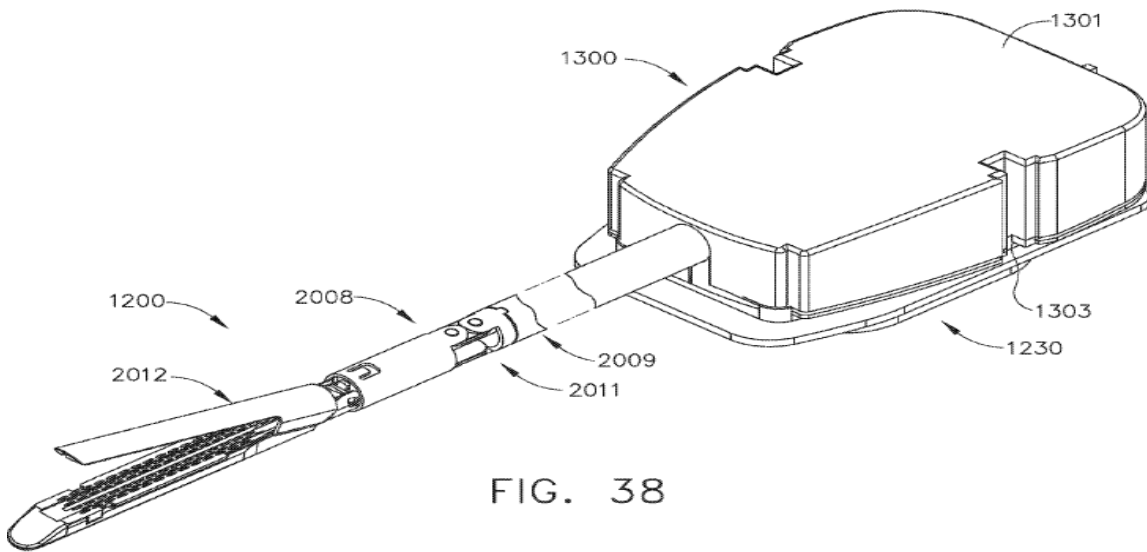


Figure 38 “is a perspective view of a surgical tool embodiment of the present invention.” *Id.* at 5:16–17. As shown in Figure 38, surgical tool 1200 includes interface 1230 and tool mounting portion 1300. *Id.* at 28:20–25. Figure 33 is reproduced below.

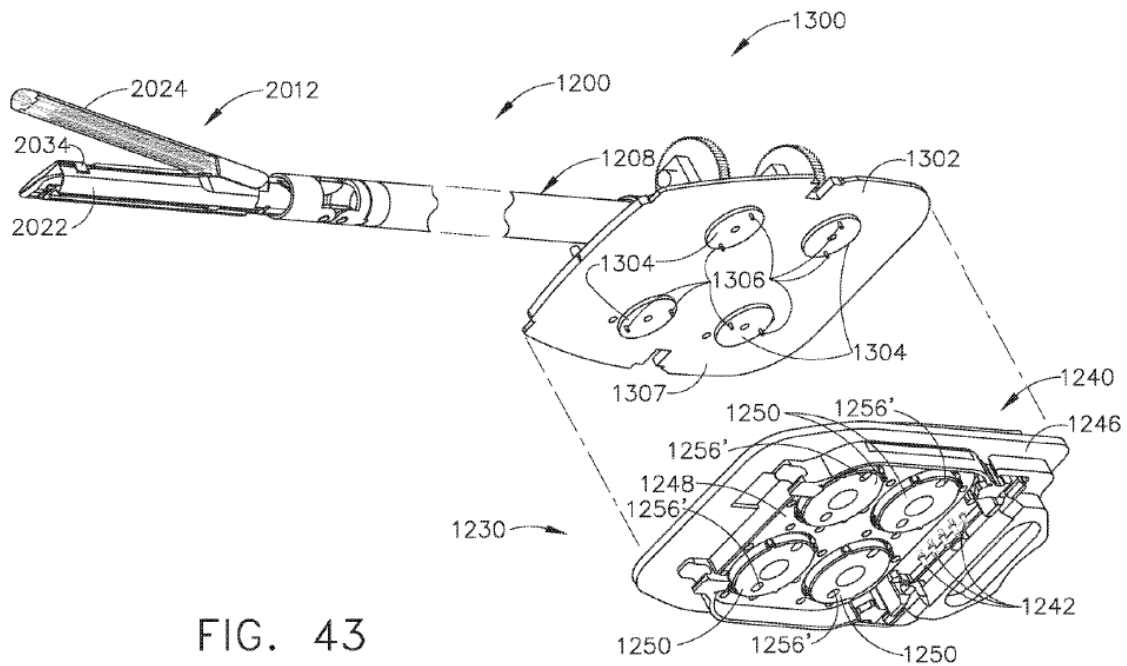


Figure 43 “is a partial bottom perspective figure of the surgical tool embodiment of FIG. 38.” *Id.* at 5:24–25. Tool mounting portion 1300 includes tool drive assembly 1010 (not numbered in Figure 43) with rotatable bodies 1250 and driven elements 1304. *Id.* at 28:26–51. Figure 44 is reproduced below.

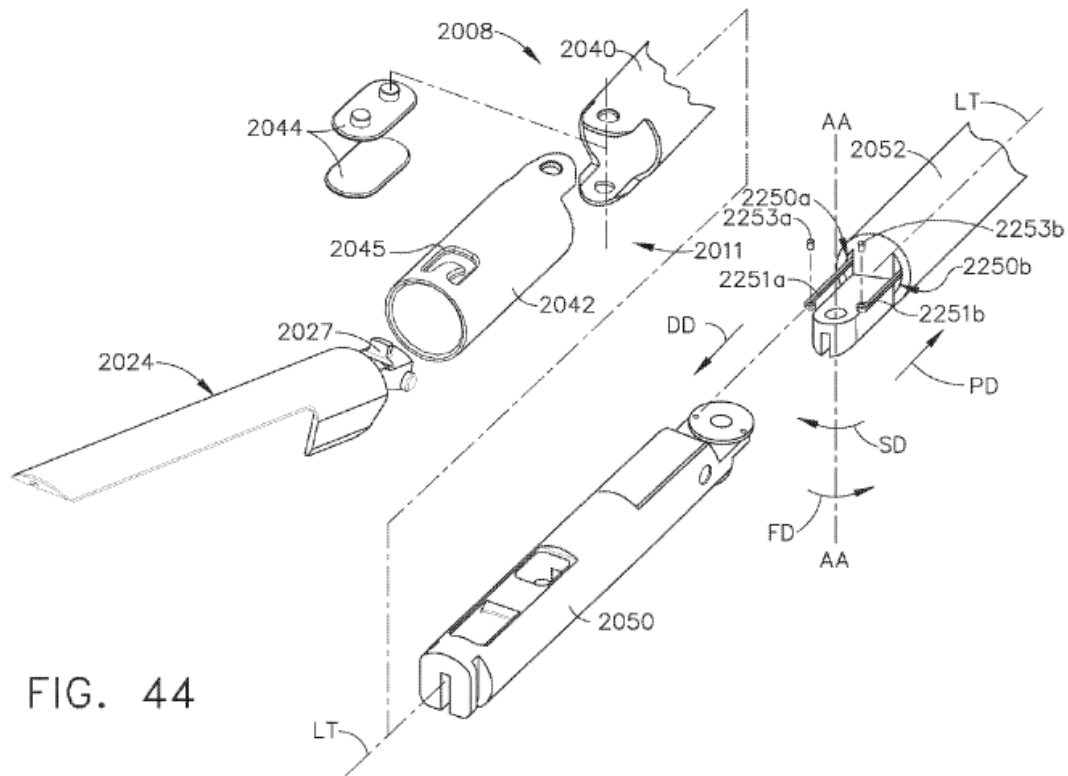


Figure 44 “is a partial exploded view of a portion of an articulatable surgical end effector embodiment of the present invention.” *Id.* at 5:26–28. As shown in Figure 44, anvil 2024 includes tab 2027 that engages closure tube 2042 via opening 2045. *Id.* at 30:46–67.

### *B. Illustrative Claims*

Challenged claims 1, 6, 11, and 14 are independent. Claims 2–5 ultimately depend from claim 1, claims 7–10 ultimately depend from claim 6. Claim 1 illustrative and is reproduced below:

1. A stapling system, comprising:
  - a housing comprising a rotary drive member;
  - an elongate shaft extending from said housing, wherein said elongate shaft defines a longitudinal axis;
  - an end effector, comprising:
    - a jaw configured to support a staple cartridge; and
    - an anvil rotatable relative to said jaw between an open position and a fully-closed position, wherein said anvil comprises a cam surface;
  - a closure cam operably coupled with said rotary drive member, wherein said closure cam is configured to move longitudinally to engage said cam surface and transmit a closing motion to said anvil to move said anvil into said fully-closed position; and
  - an opening member configured to move longitudinally to apply an opening force to said anvil at a location other than said cam surface to move said anvil into said open position.

### *C. Related Proceedings*

The parties indicate that the '677 patent is involved in: *Ethicon LLC et al. v. Intuitive Surgical, Inc. et al.*, No. 1:17-cv-00871-LPS in the United States District Court for the District of Delaware (“the Delaware litigation”).<sup>1</sup> Pet. 2; Paper 6, 2.

Petitioner is also challenging 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 Nos. IPR018-01247, IPR2018-01248, and IPR2018-01254 (the '969 patent); (4)

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<sup>1</sup> Patent Owner contends that U.S. Patent Nos. 9,585,658 B2 (“the '658 Patent”), 8,616,431 B2 (“the '431 Patent”), 8,479,969 B2 (“the '969 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 6, 2.

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Case No. IPR2018-00938 (the '874 patent); and (5) Case No. IPR2018-01703 (the '431 patent).

*D. Real Parties in Interest*

Petitioner identifies itself as the only real party-in-interest. Pet. 1.

*E. Evidence Relied Upon*

Petitioner relies on the following references in asserting that claims 1–14 of the '658 patent are unpatentable:

<b>Reference</b>	<b>Exhibit No.</b>
U.S. Patent No. 6,981,628 B2 issued January 3, 2006 to Wales (“Wales”)	1004
U.S. Patent No. 5,465,895 issued November 14, 1995 to Knodel et al. (“Knodel”)	1005
U.S. Patent Application Publication No. US 2003/0083673 A1 published May 1, 2003 to Tierney et al. (“Tierney”)	1006

Petitioner also relies upon a Declaration of Dr. Bryan Knodel. Ex. 1003.

*F. The Asserted Grounds of Unpatentability*

Petitioner contends that claims 1–14 are unpatentable based on the following grounds:

<b>References</b>	<b>Basis</b>	<b>Claim(s) Challenged</b>
Wales	§ 102	1–14
Wales and Knodel	§ 103	3 and 8
Wales and Tierney	§ 103	1–14
Wales, Tierney, and Knodel	§ 103	3 and 8

### III. ANALYSIS

#### A. *Claim Construction*

The claim construction standard to be employed in an *inter partes* review recently has changed. *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Nov. 13, 2018) (to be codified at 37 C.F.R. pt. 42). That new standard, however, applies only to proceedings in which the petition is filed on or after November 13, 2018. This Petition was filed on May 23, 2018. Under the standard in effect at that time, “[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.” 37 C.F.R. § 42.100(b); *see also* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016) (upholding the use of the broadest reasonable interpretation standard). Accordingly, we determine whether to institute trial in this proceeding using the broadest reasonable construction standard. In determining the broadest reasonable construction, we presume that claim terms carry their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). A patentee may define a claim term in a manner that differs from its ordinary meaning; however, any special definitions 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 offers a construction of the following terms: “rotary drive member (claim 1, 4, and 5); “rotary member” (claims 6, 9, and 10); and “rotatable drive member” (claims 11–14). Pet. 14. Petitioner contends those three terms have the same meaning of “a gear, trigger, or other component



that rotates to cause movement of another component.” *Id.* Patent Owner agrees that each of the three noted terms share the same meaning, but offers its own construction of those terms as a “component that rotates to drive another component in response to actuation of the stapling system.” Prelim. Resp. 15. The constructions offered by the parties are similar, but with one distinction. Patent Owner contends that the noted terms at issue, e.g., “rotary drive member” cannot include a “trigger” or any components associated with a trigger. *Id.* at 18–19. That is allegedly because, according to Patent Owner, the Specification of the ’658 patent does not describe a trigger as a rotary drive, and discloses embodiments in which both a “drive” component and a “trigger” are present. *Id.* at 19. Patent Owner, thus, takes the view that such disclosure in the Specification prohibits a trigger from being a rotary drive member.

At this time, we are not persuaded that the Specification of the ’658 patent somehow categorically excludes any component regarded as, or associated with, a “trigger” from operating as a “rotary drive member.” That the Specification may not describe a trigger as a “rotary drive member” does not, in and of itself, compel a determination that a trigger cannot be a rotary driver member. Similarly, that the Specification of the ’658 patent describes embodiments in which both a “drive” component and a “trigger” component are present in a given device provides little, if any, meaningful insight into Patent Owner’s position that a trigger is prohibited from also being a drive component. For purposes of this Decision, we concur with both parties’ assessment that a “rotary drive member” is a component that rotates to drive another component, but we conclude that such a drive member does not exclude a trigger or component associated with a trigger.

We find that it is unnecessary to provide an explicit construction or discussion of any additional claim term in order to resolve the issues in dispute at this stage of the proceeding. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining that claim terms need to be construed “only to the extent necessary to resolve the controversy” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*B. Level of Ordinary Skill in the Art*

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

A person of ordinary skill in the art at the time of the alleged invention (“POSITA”) 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 surgical devices. More education may compensate for less work experience, and more work experience may compensate for less education.

Ex. 1003 ¶ 27.

Patent Owner does not challenge the above-noted testimony or offer any assessment of its own as to the level of ordinary skill in the art. For purposes of this Decision, we adopt the Dr. Knodel’s assessment of the level of ordinary skill in the art. We further find that the cited prior art references reflect the appropriate level of skill at the time of the claimed invention and that the level of appropriate skill reflected in these references is consistent with the definition of a person of ordinary skill in the art proposed by Petitioner. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

*C. Anticipation Based on Wales*

*1. Overview of Wales*

Wales is titled “Surgical Instrument with a Lateral-Moving Articulation Control.” Ex. 1004, [54]. Wales’ Figure 1 is reproduced below.

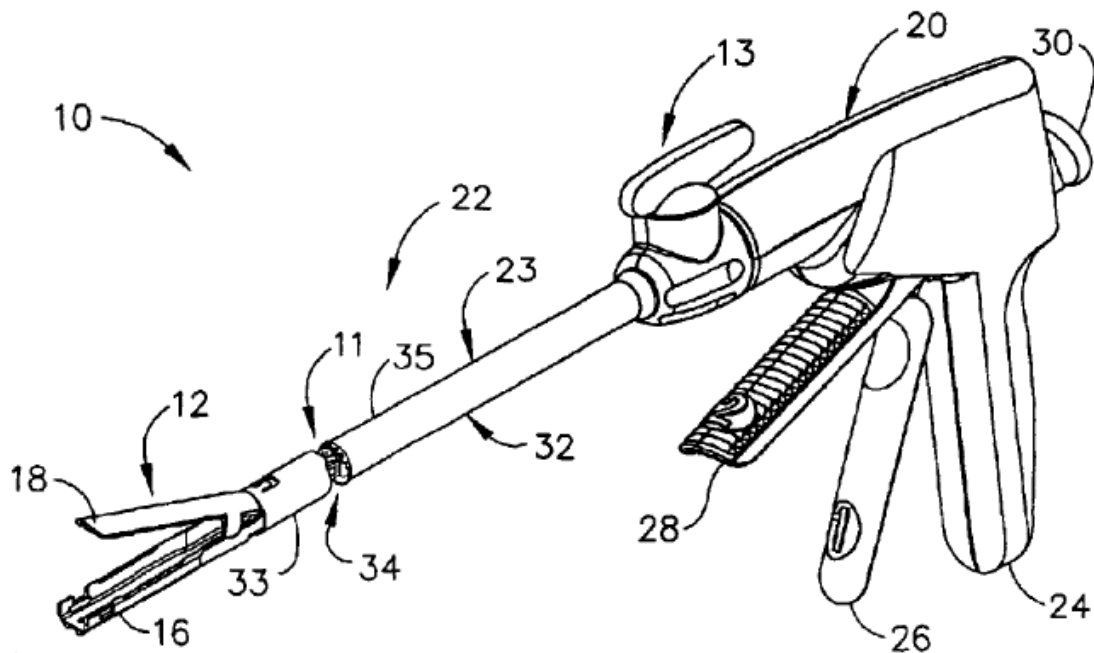


FIG. 1

Figure 1 above shows “a perspective view of an articulating surgical instrument in a nonarticulated position.” *Id.* at 3:43–44. Surgical stapling and severing instrument 10 includes handle portion 20, closure trigger 26, shaft 23, articulating mechanism 11, and end effector 2. *Id.* at 4:57–61. End effector 12 includes anvil 18 and elongate channel 16. *Id.* at 4:61–64. Wales Figure 7 is reproduced below.

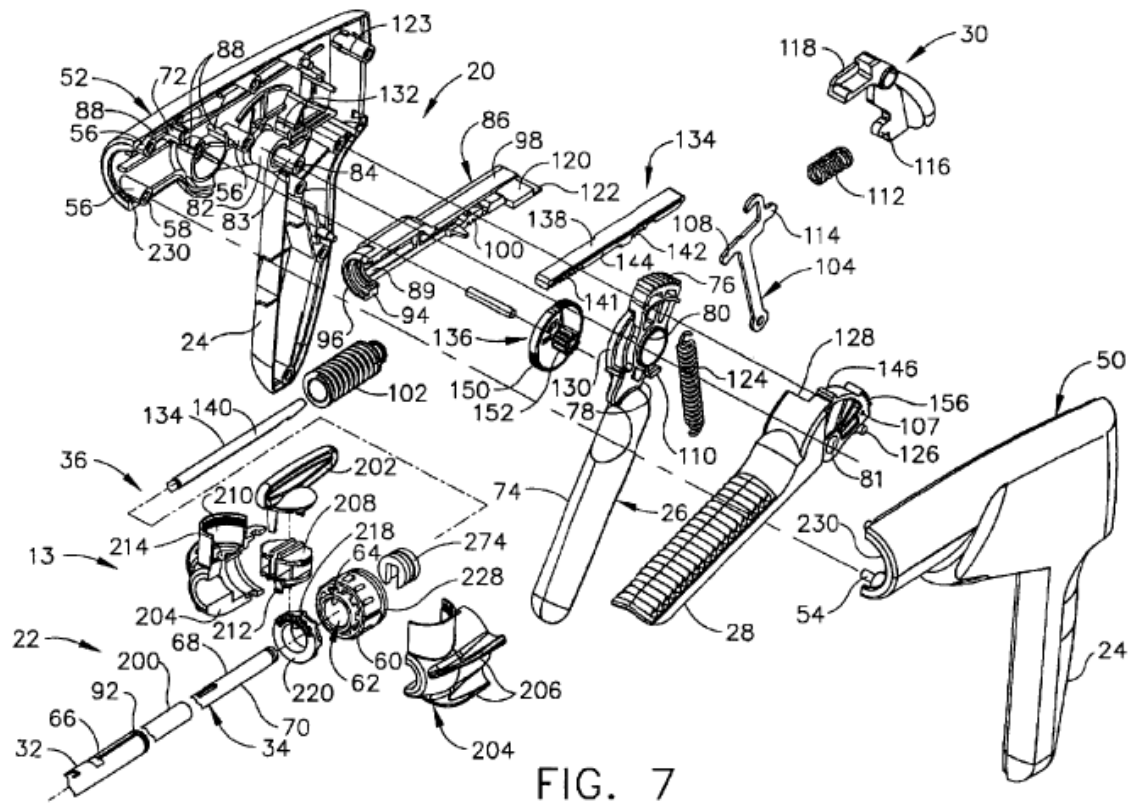


Figure 7 “depicts a perspective, exploded view of the handle portion of the proximal end of the surgical instrument of FIG. 1.” *Id.* at 3:61–63. Closure trigger 26 includes handle section 74, and gear segment section 76. *Id.* at 6:32–33. Wales also discloses that “a closure yoke 86 is housed within the handle portion 20 for reciprocating movement therein and serves to transfer motion from the closure trigger to the closure sleeve 32.” *Id.* at 6:45–47. Wales’ Figure 11 is reproduced below.

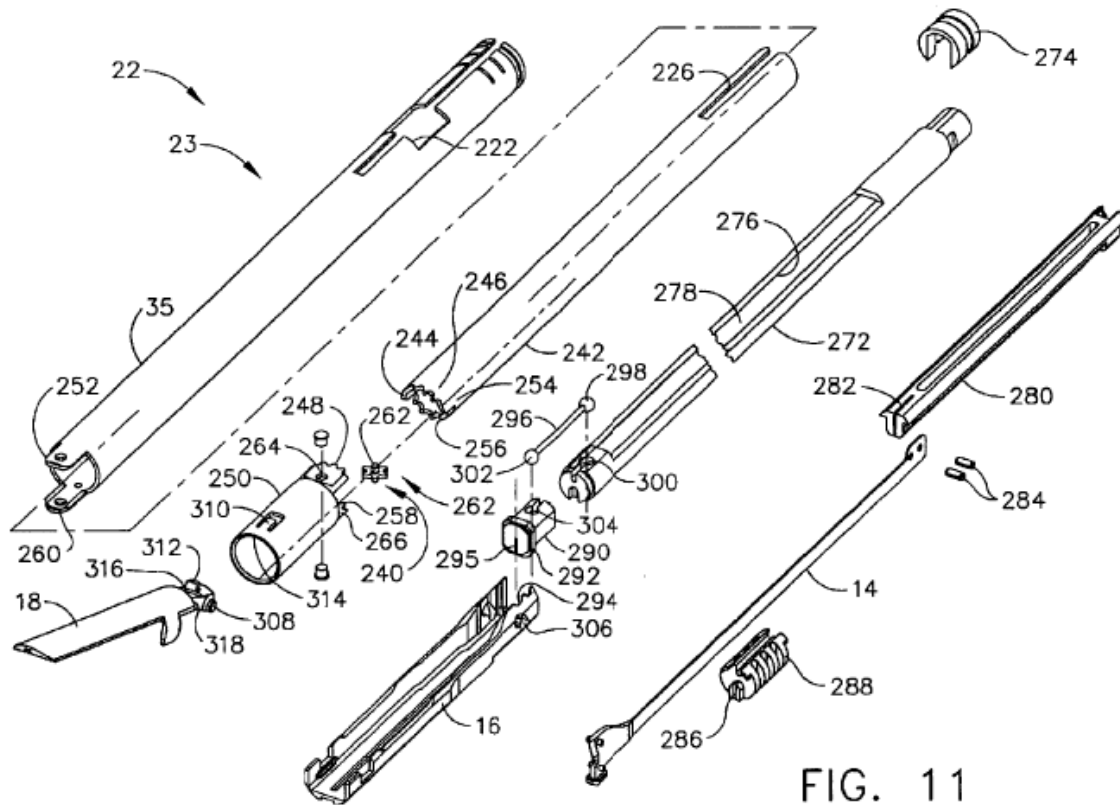


FIG. 11

Figure 11 “depicts a perspective, exploded view of an implement portion for the surgical instrument of FIG. 1. . .” *Id.* at 4:10–11. Wales describes the following:

The elongate channel 16 also has an anvil cam slot 306 that pivotally receives an anvil pivot 308 of the anvil 18. The closure ring 250 that encompasses the articulating frame member 290 includes a distally presented tab 310 that engages an anvil feature 312 proximate but distal to the anvil pivot 308 on the anvil 18 to thereby effect opening. When the closure ring 250 is moved forward, its distally presented closing face 314 contacts a ramped cylindrical closing face 316, which is distal to tab 312 of the anvil 18. This camming action closes the anvil downward until the closing face 314 of the closure ring 250 contacts a flat cylindrical face 318 of the anvil 18.

*Id.* at 10:19–30.

## 2. *Petitioner's Contentions*

Petitioner contends that claims 1–14 of the '658 patent are anticipated by Wales. Petitioner provides detailed assessment of the content of Wales and how it discloses all the features of claims 1–14. *See* Pet. 15–44. Petitioner also supports that assessment with citation to the Declaration testimony of Dr. Knodel (Ex. 1004). For instance with respect to claim 1, Petitioner explains how Wales discloses a stapling system with all the features required, including each of (1) “a housing comprising a rotary drive” (Pet. 18–20); (2) “an elongate shaft” (*id.* at 20–22); (3) an end effector with “a jaw configured to support a staple cartridge” (*id.* at 22–23); (4) an “anvil” that rotates relative to the jaw between open and closed positions, and which also includes a “cam surface” (*id.* at 23–25); (5) a “closure cam” as recited (*id.* at 25–27); and, lastly, (6) an “opening member” configured and arranged as required (*id.* at 27–28). Petitioner similarly shows where all the feature of claims 2–14 reside in Wales. *Id.* at 29–44.

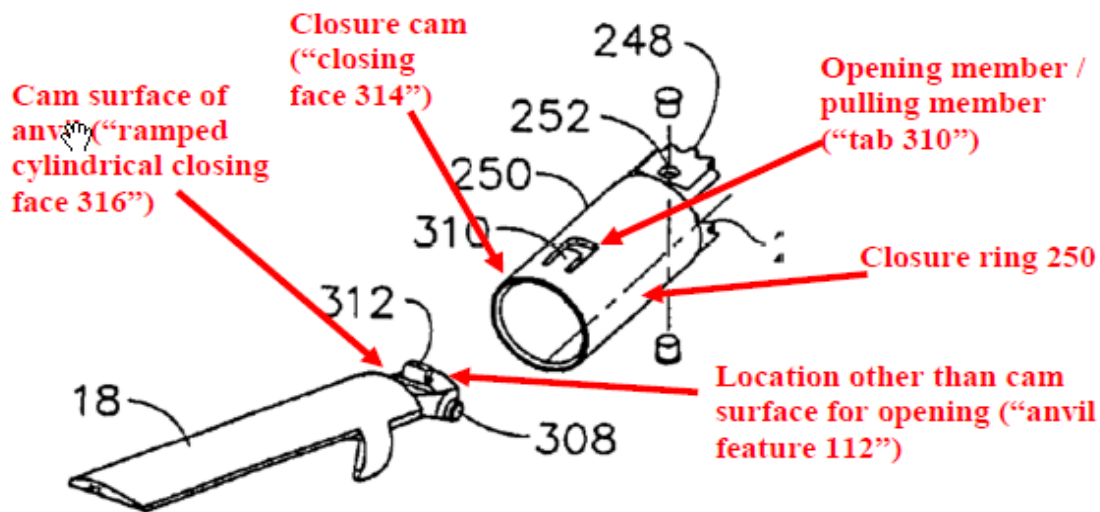
## 3. *Patent Owner's Contentions*

At this stage of the proceeding, Patent Owner mounts two challenges to Petitioner's anticipation ground based on Wales. Patent Owner first contends that all of the claims require an “opening member” (or “pulling member” in claim 11) and a “closure cam” that are “separate components” or “separate structures.” *Id.* at 27–29. Patent Owner urges that Petitioner has relied on a singular structure that is Wales' closure ring 250” to account for those two components, which Patent Owner contends is impermissible as a matter of law. Prelim Resp. 26–31 (citing *Gaus v. Conair Corp*, 363 F.3d 12814, 1288 (Fed. Cir. 2004) and *Becton, Dickinson and Co. v. Tyco Healthcare*, 616 F.3d 1249, 1254 (Fed. Circ. 2010)). Patent Owner also

contends that Wales lacks disclosure of a “rotary drive member” as required by all of claims 1–14.<sup>2</sup>

#### 4. Discussion

On the record presently before us, we are not persuaded that Patent Owner’s arguments identify deficiencies in Petitioner’s anticipation ground. Even if we were to assume that Patent Owner’s legal theory is correct, i.e., that the claimed “opening member”/“pulling member” and “closure cam” must be separate structures, we do not discern that such theory is germane here. Patent Owner urges that Petitioner generally has pointed only to Wales’ closure ring 250 as satisfying the pertinent two claim features, but that generalization, in our view, does not capture accurately Petitioner’s position. A version of Wales’ Figure 11, as annotated by Petitioner, is reproduced below.

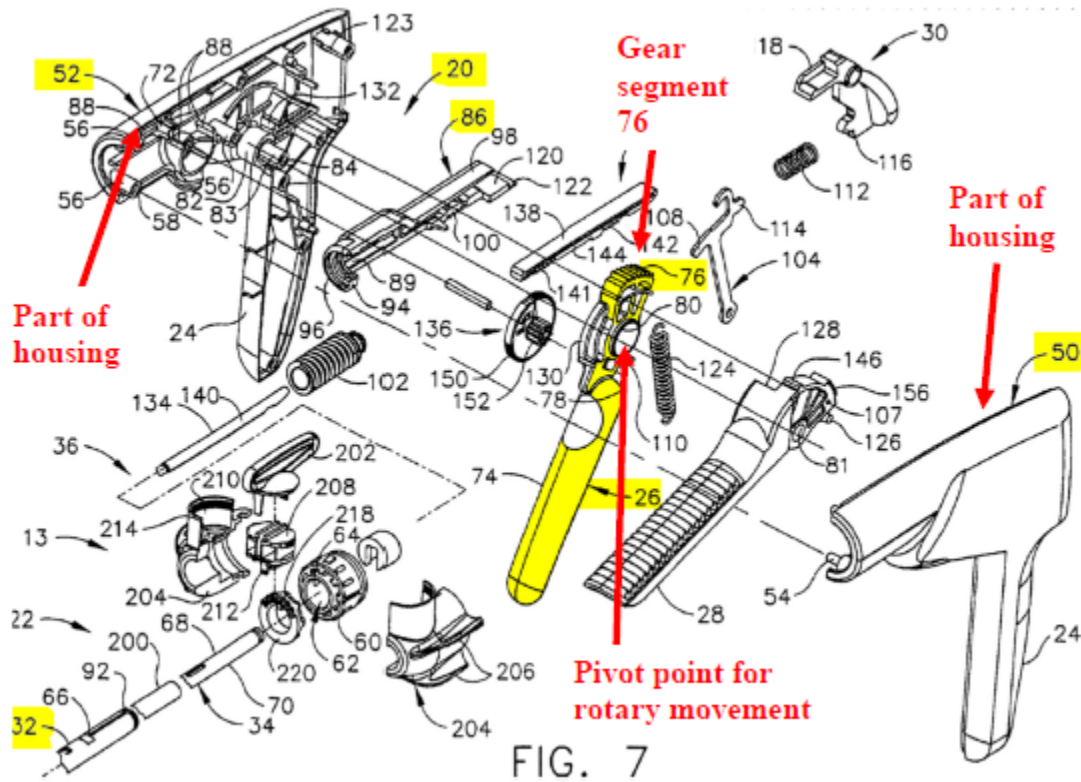


<sup>2</sup> Claim 6 refers to a “rotary member,” and claims 11 and 14 recite a “rotatable drive member.” As noted above, the parties agree that each of those terms have the same meaning as the “rotary drive member” recited in claim 1.

Pet. 18. The above-noted feature is a segment of Wales's Figure 11 that includes red annotated lettering identifying a "closure cam" and an "opening member"/"pulling member" Specifically, Petitioner identifies Wales' "closing face 314" as the required "closure cam," and Wales' "tab 310" as an "opening member." Although both closing face 314 and tab 310 are associated with closure ring 250, those components are different structures that are physically separated from one another. Closing face 314 is located at the end of closure ring 250 and operates to effect closure of anvil 18 through interaction with ramped cylindrical closing face 316. Ex. 1004, 10:24–30. On the other hand, tab 310 is a structure located along a portion of closure ring 250 that engages anvil features 312 to effect opening of anvil 18. *Id.* at 10:20–24. At this time, we do not discern any requirement, legal or otherwise, that precludes closing face 314 and tab 310 from constituting the two pertinent features of the claims simply because both of those components have an affiliation with closure ring 250.

We also are not persuaded on this record that Petitioner has accounted inadequately for the rotary drive member required by the claims. Petitioner points to gear segment section 76 as forming a rotary drive member. In taking that position, Petitioner provides an annotated version of Wales' Figure 7, which is reproduced below.





Pet. 19. The annotated version of Figure 7 above highlights portions of trigger 26 and includes text identifying “Gear segment 76” and “Pivot point for rotary movement.” Petitioner also points to description in Wales that trigger 26 is pivotally mounted on handle portion 20. *Id.* at 19 (citing Ex. 1004, 6:34–44. Petitioner further explains that “[t]he trigger causes rotary drive member (‘gear segment section 76’) to rotate about the pivot point, which causes ‘yoke 86 and, hence, the closure sleeve 32 [to] move distally.’ . . . The closure sleeve 32, in turn, causes ‘closure ring 250’ to move distally.” Pet. 19–20 (citing Ex. 1004, Figs. 1, 6, 7; 6:32–37, 45–64; 8:15–9:42). In our view, gear segment 76, in pivoting/rotating to effect movement of yoke 86 to cause distal motion of closure sleeve 32, is viewed reasonably as a rotary driver member.

Patent Owner’s argument to the contrary is largely premised on its

construction of “rotary drive member” as excluding any portion of a trigger. As discussed above, on this record, however, we are not persuaded that such construction is correct. Patent Owner also characterizes Wales as disclosing only a “linear drive” because the motion of yoke 86 is said to be “linear motion.” Prelim. Resp. 33–34. Even if that is true, it is the gear segment section 76 on which Petitioner relies as a rotary drive member, and that gear segment section is understood to pivot/rotate.

We have considered Patent Owner’s arguments offered in its Preliminary Response, however, on the record currently before us, we are persuaded that the Petition establishes a reasonable likelihood that Petitioner will prevail on its ground that claims 1–14 are anticipated by Wales.

*D. Unpatentability Based on Wales and Knodel*

Petitioner also contends that claims 3 and 8 are unpatentable over Wales and Knodel. Claim 3 depends from claim 2 and claim 8 depends from claim 7. Claims 3 and 8 recite that the staple cartridge is “removably replaceable” within the jaw. Petitioner offers this ground as an alternative if Wales is not viewed as disclosing a removably replaceable cartridge. On the present record, however, we are persuaded that Wales discloses the added features of claims 3 and 8. We also are persuaded at this time that Petitioner’s reliance on Knodel’s teachings account for claims 3 and 8 as well. *See* Pet. 44–51.

*E. Unpatentability Based on Wales and Tierney, and  
Wales, Tierney and Knodel*

Petitioner also alternatively proposes that claims 1–14 are unpatentable over Wales and Tierney, and that claims 3 and 8 are unpatentable based on Wales, Tierney, and Knodel. Petitioner offers the

grounds involving Tierney as an alternative ground in the event that Wales is considered to lack disclosure of a rotary drive member. As discussed above, at this time we are persuaded that Wales' gear segment section 76 is viewed reasonably as forming the required rotary drive member. For purposes of this Institution Decision, we do not also consider whether the teachings of Tierney also account for that feature.

#### IV. CONCLUSION

Having considered the Petition and its underlying supporting documents, and Patent Owner's Preliminary response, we conclude that institution of trial is warranted, and we do so. We institute trial on all grounds and all claims. *See Guidance on the impact of SAS on AIA trial proceedings* (April 26, 2018) <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial> ("As required by the [SAS] decision, the PTAB will institute as to all claims or none. At this time, if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition."); *see also Medtronic, Inc. v. Barry*, 891, F.3d 1368, n.1 (Fed. Circ. 2018) ("we understand from the Board's recent guidance document . . . that it will consider the previously non-considered grounds on remand.")

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–14 of the '658 patent is instituted with respect to all grounds of unpatentability presented in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of a trial, which commences on the entry date of this Decision.

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