

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KOKI HOLDINGS AMERICA LTD.,
Petitioner,

v.

KYOCERA SENCO INDUSTRIAL TOOLS, INC.,
Patent Owner.

IPR2025-00261
Patent 11,034,007 B2

Before BARRY L. GROSSMAN, MITCHELL G. WEATHERLY, and
SCOTT C. MOORE, *Administrative Patent Judges*.

WEATHERLY, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Koki Holdings America Ltd. (“Petitioner”) filed a petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 11,034,007 B2 (Ex. 1001, “the ’007 patent”). 35 U.S.C. § 311. Kyocera Senco Industrial Tools, Inc. (“Patent Owner”)

timely filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). With our prior authorization, Petitioner filed a reply to the Preliminary Response (Paper 8, “Reply”), and Patent Owner filed a surreply in support of its Preliminary Response (Paper 9, “Surreply”).

Institution of an *inter partes* review is authorized by statute when “the information presented in the petition filed under section 311 and any response filed under section 313 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.” 35 U.S.C. § 314(a). Based on our review of the record,¹ we conclude that Petitioner is reasonably likely to prevail with respect to at least one of the challenged claims.

Petitioner challenges the patentability of claims as follows:

Claims challenged	35 U.S.C. § ²	Reference(s)
1, 7, 8, 17, 20	102	Haley ³
2–6, 9–16, 18, 19	103	Haley, Lai ⁴

¹ The panel prefers that, for every evidentiary exhibit submitted in P-TACTS, the party should assign a short, descriptive name in the “Document name” field. Patent Owner’s exhibits and Petitioner’s exhibits 1018 and 1019 were not filed with meaningfully descriptive names. Submissions not meeting these expectations may be refused.

² The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. §§ 102 and 103 that became effective March 16, 2013. The application for the ’007 patent was filed on November 5, 2020, but claims priority to applications filed before 2013. Therefore, we apply the pre-AIA versions of 35 U.S.C. §§ 102 and 103.

³ U.S. Patent No. 3,150,488 (Ex. 1004, “Haley”).

⁴ U.S. Patent No. 5,503,319 (Ex. 1005, “Lai”).

Claims challenged	35 U.S.C. § ²	Reference(s)
1–20	103	Saari, ⁵ Enstrom, ⁶ Lai
1–20	103	Kondo ⁷
1–20	103	Pedicini ⁸

B. Related Proceedings

Petitioner identifies as related proceedings the following matters involving related patents from the same patent family: *Senco Brands, Inc. v. Hitachi Koki USA Ltd.*, S.D.OH. No. 1:17-cv-00061 which was refiled as D.DE. No. 1:17-cv-00598; *Certain Gas Spring Nailers and Components Thereof*, ITC Inv. No. 337-TA-1082; *Kyocera Senco Indus. Tools Inc. v. ITC*, C.A.F.C. No. 20-1046; and *Koki Holdings America Ltd. v. ITC*, C.A.F.C. No. 20-2050. Pet. 2. Patent Owner has identified as a related proceeding the co-pending district court proceeding of *Kyocera Senco Industrial Tools, Inc. v. Koki Holdings America, LTD.*, Case No. 1:24-cv-01383 (the “Litigation”). Paper 5, 1. Patent Owner also identifies as related proceedings requests for inter partes review of the following patents, which it also accused Petitioner of infringing in the Litigation: U.S. Patent Nos. 10,478,954 (IPR2025-00262), 11,241,776 (IPR2025-00263), and 11,845,167 (IPR2025-00264). Pet. 3; Paper 5, 1.

C. The ’007 Patent

The ’007 patent is directed to “a gas spring linear fastener driving tool, in which a cylinder filled with compressed gas is used to quickly force

⁵ U.S. Patent No. 3,924,692 (Ex. 1006, “Saari”).

⁶ U.S. Patent No. 3,913,685 (Ex. 1007, “Enstrom”).

⁷ U.S. Patent No. 5,720,423 (Ex. 1008, “Kondo”).

⁸ U.S. Patent Pub. 2006/0180631 A1 (Ex. 1009, “Pedicini”).

a piston through a driving stroke movement, while also driving a fastener into a workpiece.” Ex. 1001, 1:37–41. Petitioner provides annotated versions of Figures 20 and 21 of the ’007 patent, which we reproduce below, to illustrate and explain the operation of one embodiment of the driving tool.

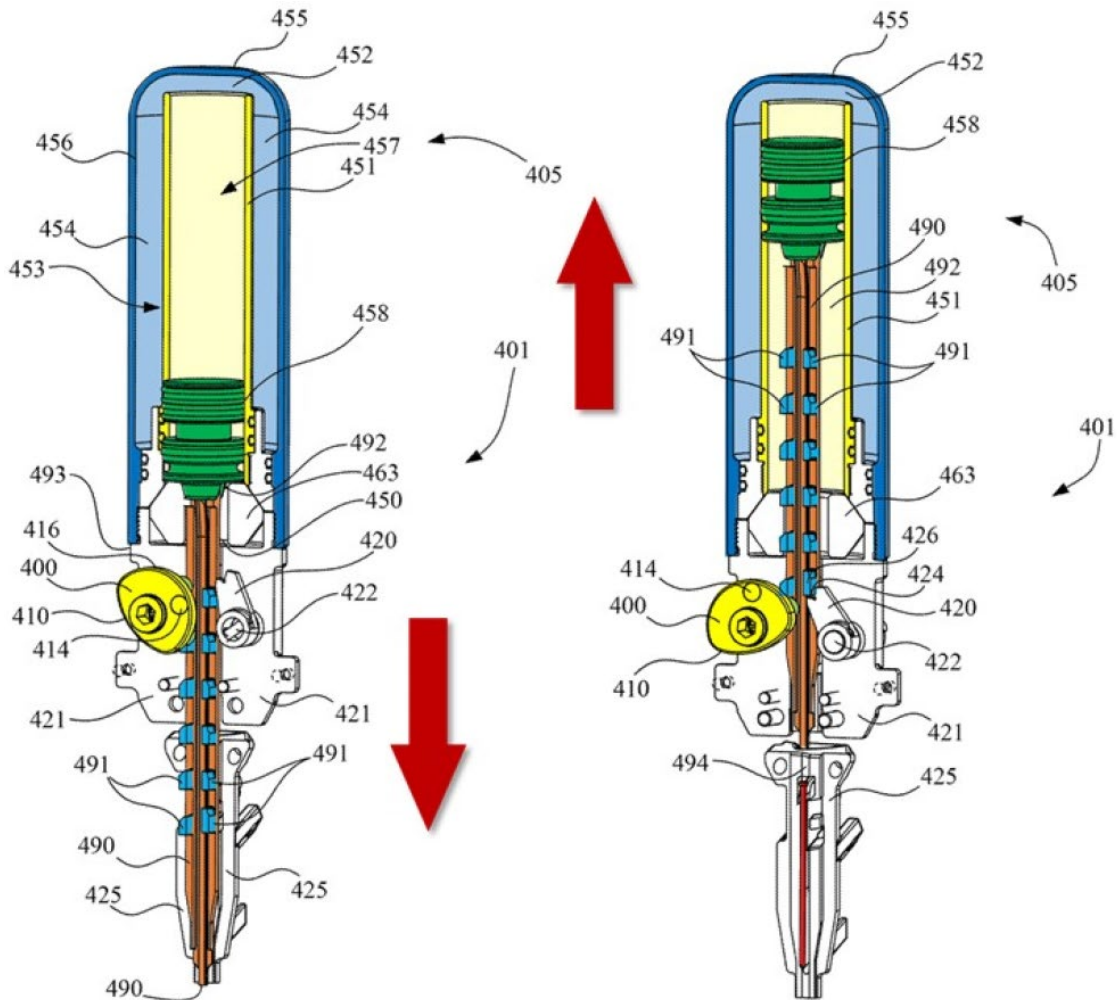


Fig. 20

Fig. 21

The annotated version of Fig. 20, above left, is a partial cross-sectional perspective view of the gas spring cylinder portion of an embodiment of the driving tool. Ex. 1001, 6:23–27, Fig. 20. Piston 458 (green) and driver member 490 (orange) are shown at the “lowest ‘driven’ position.” *Id.* The downward pointing red arrow next to Fig. 20 indicates the direction of travel

for piston 458 (green) and driver member 490 (orange) when tool 401 drives a nail. Pet. 5–6.

The annotated version of Fig. 21 above right is a similar perspective view of the tool from Fig. 20, but with piston 458 (green) and driver member 490 (orange) shown in their top-most position and a nail (red) loaded in tool 401 just below the distal end of driver member 490 (orange). The red arrow to the left of Fig. 21 illustrates the direction in which piston 458 (green) and driver member 490 (orange) travel to permit a nail to be loaded into position for being driven by tool 401.

In the embodiment shown in both figures, driver member 490 (orange) is attached to piston 458 (green) and lifted by lifter member 400 (bright yellow) against compressed gas in a hollow cylinder 492 (light yellow) and storage chamber 454 (blue). Ex. 1001, Figs. 20–21, 21:57–22:23. Driver member 490 (orange) is then released and the compressed gas pushes on piston 458 (green), and driver member 490 (orange) to drive a nail (red) into a workpiece. *Id.*

Claims 1, 9, 14, and 17 are the independent claims. Claim 1 recites:

1[P]. A gas pressure system for a portable power tool, said gas pressure system comprising:

[1.1] a hollow cylinder having a movable piston therewithin; and

[1.2] a storage chamber that is in fluidic communication at all times with said cylinder, said storage chamber being charged with a pressurized gas;

[1.3] wherein: said movable piston moves in a reciprocating pattern during an operating cycle, including moving through a drive stroke that is caused by said pressurized gas;

[1.4] said pressurized gas is not vented to atmosphere after said drive stroke, but instead said pressurized gas is re-used for a plurality of said operating cycles; and

[1.5] said movable piston is the sole movable piston in the gas pressure system.

Ex. 1001, 39:6–22 (with Petitioner’s bracketed labels to ease discussion).

II. ANALYSIS

A. Level of Ordinary Skill in the Art

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The parties’ briefs do not propose a specific definition of a level of ordinary skill in the art. *See generally*, Pet., Prelim. Resp. Dr. Vallee, however, testifies that one of ordinary skill in the art relevant to the ’007 patent:

would have either (i) a Master’s degree in mechanical engineering with at least two years of experience in power nailer design; (ii) a Bachelor’s degree in mechanical engineering with at least five years of experience in powered nailer design; or (iii) ten (or more) years of experience in powered nailer design. This experience in powered nailer design would include mechanical design, tool design, manufacturing, mechanics of materials, stress analysis, ergonomics, and human factors.

Ex. 1003, ¶ 49. For purposes of this Decision, we adopt and apply Dr. Vallee’s formulation regarding the level of ordinary skill in the art.

B. Claim Interpretation

We interpret claims in the same manner used “in a civil action under 35 U.S.C. § 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b). When applying that standard, we interpret the claim language as it would have been understood by one of ordinary skill in the art in light of the specification. *Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*,

853 F.3d 1272, 1279–80 (Fed. Cir. 2017). Thus, we give claim terms their ordinary and customary meaning as understood by an ordinarily skilled artisan. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Our rules require that a petition set forth “[h]ow the challenged claim is to be construed.” 37 C.F.R. § 42.104(b)(3). For means-plus-function limitations, “the construction of the claim must identify the specific portions of the specification that describe the structure, material or acts corresponding to each claimed function.” *Id.*

Patent Owner presents a number of issues relating to claim interpretation that we address below.

1. Lifter

The Petition contends that the “lifter” limitation is a means-plus-function limitation, Pet. 7, which Patent Owner does not dispute, Prelim. Resp. 10–14. Patent Owner argues, however, that Petitioner has “fail[ed] to identify any structure in the ’007 Patent to perform the claimed function.” Prelim. Resp. 10. We disagree.

Petitioner identifies the structures in the Specification corresponding to the “lifter” as follows:

The “lifter” (“lifter member”) of the ’007 patent includes a rotatable cam lifter 100 (yellow below left), with pin 104, 106, and 108 (green) on its face surface that engage protrusions 92 (blue) on the driver member 90 (orange). ’007 patent, 9:36–52, 16:39–53, Fig. 12. The ’007 patent also discloses two-pin

variants: lifter members 465 and 480 in Figs. 31, 33. '007 patent, 32:23–38, 32:56–33:4.

Pet. 17. This identification of corresponding structure is sufficient to satisfy 37 C.F.R. § 42.104(b)(3). We also note that at this stage of the proceeding, Patent Owner does not dispute that Petitioner has correctly identified the corresponding structure. The parties may further address the proper interpretation of “lifter” at trial.

2. Gas Pressure System

Patent Owner argues that Petitioner fails to expressly construe the “gas pressure system” recited in the preamble of independent claims 1 and 17. Prelim. Resp. 21–22. Patent Owner further argues that Petitioner, through its comparison of claims 1 and 17 to Haley, improperly implies that the “gas pressure system” can be “limited to a distinct portion of a power tool.” *Id.* at 23. Patent Owner contends that such an interpretation is improper because the “gas pressure system” must refer to “the entire system,” because the “structure of the claims themselves . . . include[s] . . . every component of the tool.” *Id.*

We disagree. The “gas pressure system” recited in the preambles of claims 1 and 17 expressly refers to a system that is “for a power tool” and thus does not necessarily refer to “the entire” tool or “every component of the tool.” Ex. 1001, 39:6 (claim 1), 40:51 (claim 17). Neither claim 1 nor claim 17 recites, for example, the lifter or driver, which are required elements of an “entire” tool. *Id.* at 39:6–22 (claim 1), 40:51–67 (claim 17). The lifter and driver are introduced in dependent claims 2 and 18. *Id.* at 39:23–30 (claim 2), 41:1–9 (claim 18). Still other necessary components of a tool, e.g., a motor and power source, are introduced in dependent claims 5 and 19. *Id.* at 39:40–42 (claim 5), 41:10–13 (claim 19). By

contrast to claims 1 and 17, independent claims 9 and 14 recite a “portable fastener driving tool” and expressly recite many necessary components of such a tool including the driver, lifter, prime mover, and power source. *Id.* at 39:54 (claim 9), 40:20 (claim 14). Accordingly, we find that the “gas pressure system” of claims 1 and 17 broadly refers to a portion of a power tool rather than the “entire system” or “every component of the tool.”

3. Not Vented to Atmosphere

Limitation 1.4 recites that: “said pressurized gas is not vented to atmosphere after said drive stroke, but instead said pressurized gas is re-used for a plurality of said operating cycles.” Ex. 1001, 39:18–20. Claim 17 recites a similar limitation designated 17.4, *id.* at 40:62–64, but none of the other claims includes a similar limitation. Patent Owner argues that Petitioner implicitly and improperly interprets “not vented to atmosphere” within limitation 1.4 as permitting leakage of the pressurized gas from the storage chamber by the way in which Petitioner reads limitation 1.4 onto Kondo. Prelim. Resp. 26–28. Briefly, Kondo describes a “gas pressure system for a portable power tool” that drives fasteners. Ex. 1008, 1:48–49. Kondo also describes an “air replenishing device 30” that restores the pressure within its storage chamber if leakage reduces the pressure to unacceptable levels after “the use of the nailer for a long time.” *Id.* at 7:62–8:2.

Patent Owner contends that, because Kondo’s storage chamber leaks pressure such that Kondo adds a “replenishing device,” Kondo fails to strictly meet the requirement that “pressurized gas is not vented to atmosphere.” Prelim. Resp. 28. Petitioner correctly notes, however, that the Specification distinguishes air slowly leaking from the storage chamber from

air being intentionally “vented” to the atmosphere. Reply 3 (citing Ex. 1001, 27:62–28:5). The Specification also describes an embodiment in which “the preferred mode of the present invention is such that the charge gas should not *significantly* leak from the tool.” Ex. 1001, 31:10–12 (emphasis added). We preliminarily find that the Specification indicates that “not vented to atmosphere” does not strictly require that the storage chamber exhibit absolutely no pressure loss as the tool is cycled over time. The text of limitation 1.4 is consistent with our understanding of the Specification because it clarifies that pressurized gas is not “vented to atmosphere” so that the pressurized gas can be “re-used for a plurality of said operating cycles.” Ex. 1001, 39:18–20. Our interpretation is preliminary, and the parties may brief the issue further at trial.

4. Storage Chamber

The parties dispute the meaning of “storage chamber” as recited throughout the claims. We need not resolve this dispute to determine whether to institute review. The parties may develop their arguments further at trial.

C. Legal Standards

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), reaffirmed the framework for determining obviousness as set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *KSR* Court summarized the four factual inquiries set forth in *Graham* that we apply in determining whether a claim is reasonably likely to

be unpatentable as obvious under 35 U.S.C. § 103(a) as follows:

(1) determining the scope and content of the prior art, (2) ascertaining the differences between the prior art and the claims at issue, (3) resolving the level of ordinary skill in the pertinent art, and (4) considering objective evidence indicating obviousness or nonobviousness. *KSR*, 550 U.S. at 406.

With these standards in mind, we address each challenge below.

D. Patent Owner’s Argument that Alleged Deficiencies in the Petition Merit Denial of Institution

Patent Owner argues that we should discretionarily deny the Petition based on alleged deficiencies in the Petition. Specifically, Patent Owner argues that “even if arguments as to a few claims might have been properly presented in the Petition, a decision to institute here would require the Board to address—for the first time and with no Petitioner input—critical claim construction issues affecting nearly every claim” in contravention of the requirements of 37 C.F.R. § 42.104(b)(3). Prelim. Resp. 33–35.

For the reasons discussed above, we are not persuaded on the current record that Petitioner has violated 37 C.F.R. § 42.104(b)(3), or that critical and unresolved claim interpretation issues justifying discretionarily denying the Petition exist. We, therefore, decline to deny institution on this basis.

E. Claims 1, 7, 8, 17, and 20: Anticipation by Haley

Petitioner argues that Haley anticipates independent claims 1 and 17 and claims 7 and 8, which depend from claim 1, and claim 20, which depends from claim 17. *See* Pet. 10–15 (claim 1), 29–31 (claims 7 and 8), 38 (claims 17 and 20). For the reasons that follow, we find that Petitioner demonstrates a reasonable likelihood of prevailing on this challenge.

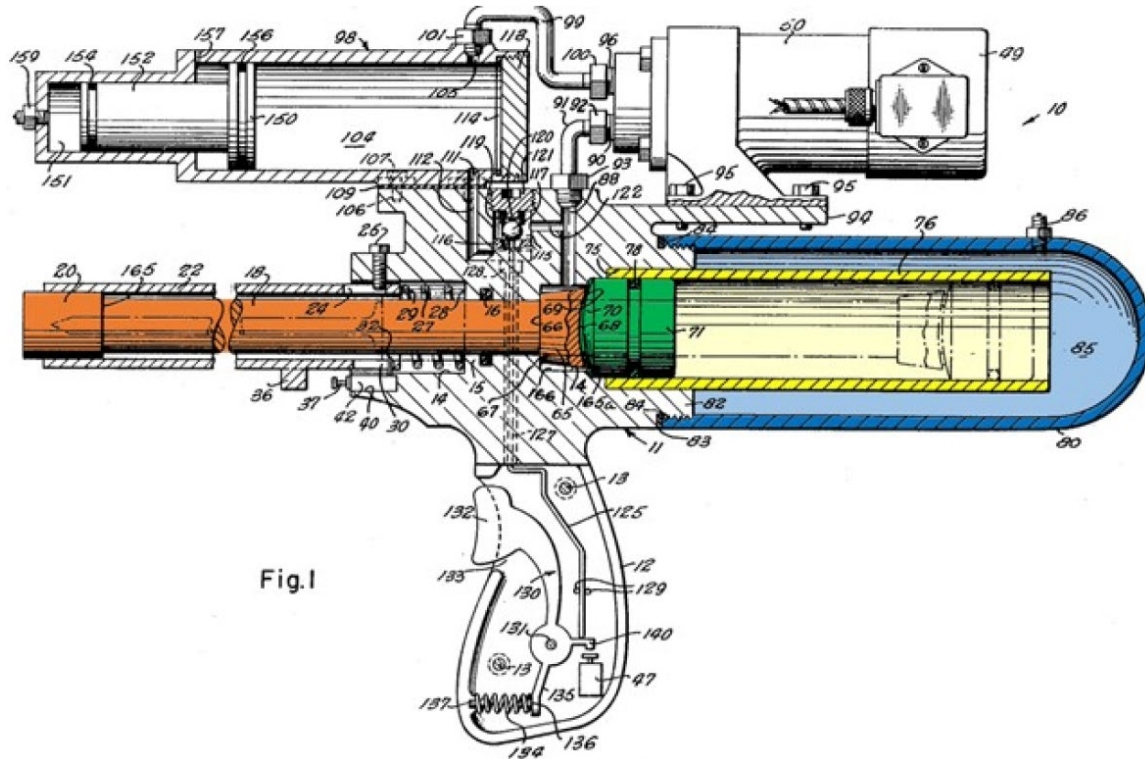
1. Independent Claim 1

a. Preamble

The preamble recites: “A gas pressure system for a portable power tool, said gas pressure system comprising.” Ex. 1001, 39:6–7. Petitioner contends that Haley discloses “power devices and more particularly to a pressure fluid power device for operating hand tools.” Ex. 1004, 1:7–9. Patent Owner does not contest that Haley describes the subject matter set forth in the preamble. We find that Petitioner demonstrates that Haley describes the subject matter of the preamble.

b. Limitation 1.1

Limitation 1.1 refers to the following text: “a hollow cylinder having a movable piston therewithin.” Ex. 1001, 39:8. Petitioner contends that Haley’s tool describes limitation 1.1 as its extension cylinder 76, which is highlighted in yellow in Petitioner’s colorized version of Haley’s Figure 1, which we reproduce below.



The colorized Figure 1 from Haley is a partial cross sectional side view of Haley's power device 10 "in its initial position prior to the commencement of the operation of the power device" with accumulator piston 71 (green) within extension cylinder 76 (yellow). Pet. 10–11 (citing Ex. 1004, 1:66–69, 3:33–39, Figs. 1, 3, 4).

Patent Owner does not contest Petitioner's showing that Haley describes the subject matter set forth in limitation 1.1, and we find that Petitioner does so.

c. Limitation 1.2

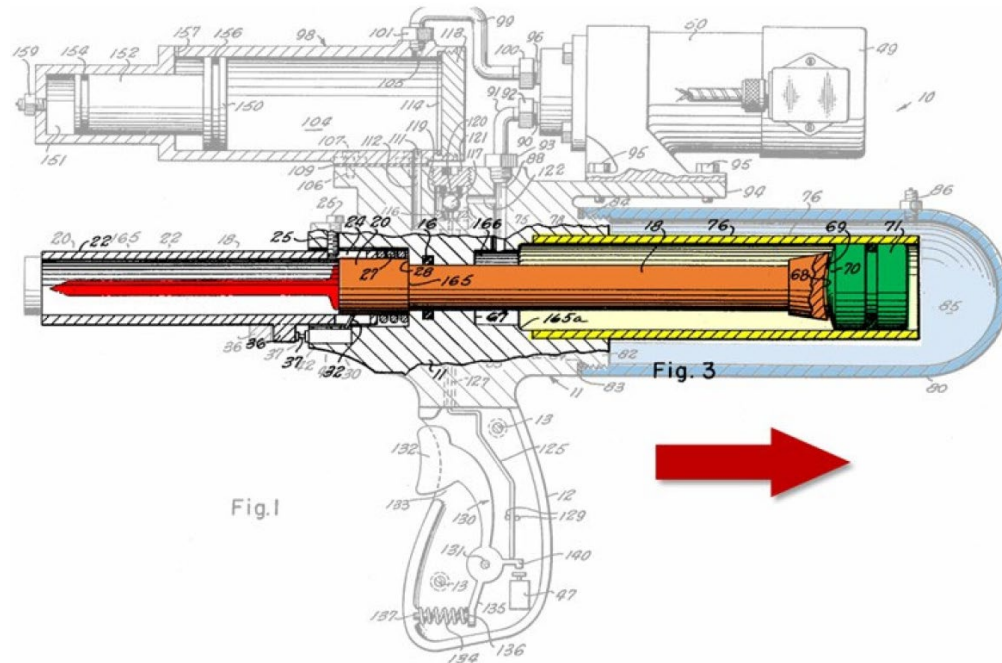
Limitation 1.2 refers to the following text: "a storage chamber that is in fluidic communication at all times with said cylinder, said storage chamber being charged with a pressurized gas." Ex. 1001, 39:10–12. Petitioner contends that Haley describes limitation 1.2 as its chamber 85 formed by elongate accumulator shell 80, which are highlighted blue in the

Figure 1 above. Pet. 11 (citing Ex. 1004, 3:40–54, Fig. 1). Petitioner contends that Haley’s storage chamber (blue) remains in fluidic communication at all times with the distinct hollow cylinder (yellow). *Id.* at 12 (citing Ex. 1004, Fig. 1). Petitioner contends that Haley’s chamber 85 and hollow cylinder are “charged with a pressurized gas” of “say 1,000 pounds per square inch” and that movement of piston 71 to the right in the figure causes pressure in chamber 85 to increase up to 2,000 psi. *Id.* (citing Ex. 1004, 7:1–10).

Patent Owner does not contest Petitioner’s showing that Haley describes the subject matter set forth in limitation 1.2, and we find that Petitioner does so.

d. Limitation 1.3

Limitation 1.3 refers to the following text: “said movable piston moves in a reciprocating pattern during an operating cycle, including moving through a drive stroke that is caused by said pressurized gas.” Ex. 1001, 39:15–17. Petitioner contends that, to prepare to drive a nail, Haley’s piston 71 is moved to the position shown in the colorized version of Haley’s Figure 3 overlaid onto Haley’s Figure 1, reproduced below.



Petitioner overlays Haley's Figure 3, which is a partial cross sectional view showing Haley's piston in the "cocked" position, onto the appropriate location within Haley's Figure 1, which illustrates the rest of Haley's tool for context. Pet. 14 (citing Ex. 1004, 5:32–74, 6:54–75, Figs. 1, 3, 4). The colorized version of Figure 3 depicts Haley's cylinder 71 in yellow, storage chamber 85 in blue, piston 71 in green, drive piston 18 in orange, and a nail in red. *Id.* The red arrow indicates the direction of travel for pistons 71 and 18 when the tool is loaded into the cocked position. *Id.* Petitioner contends that the high-pressure gas in chamber 85 (blue) moves pistons 71 (green) and 86 (orange) with hammerhead 20 (orange) leftward in the figure to drive the nail (red) into a workpiece. *Id.* at 13 (citing Ex. 1004, 5:74–6:26, 6:48–53, 7:6–13, Figs. 1, 3, 4). Haley's pistons 71 and 86 move in a reciprocating motion during operation. *Id.* at 14 (citing Ex. 1004, 5:32–74, 6:54–75, Figs. 1, 3, 4).

Patent Owner does not contest Petitioner's showing that Haley describes the subject matter set forth in limitation 1.3, and we find that Petitioner does so.

e. Limitation 1.4

Limitation 1.4 refers to the following text: "said pressurized gas is not vented to atmosphere after said drive stroke, but instead said pressurized gas is re-used for a plurality of said operating cycles." Ex. 1001, 39:18–20. Petitioner contends that Haley's system is not vented despite the presence of valve 86, which is merely used to initially charge chamber 85 with high pressure gas. Pet. 15 (citing Ex. 1004, 3:45–47, Fig. 1; Ex. 1003 ¶ 56). Petitioner also contends that Haley's sealing means 83 for shell 80 further demonstrates that gas in chamber 85 is not vented to the atmosphere. *Id.* (citing Ex. 1003, 3:40–45, Fig. 1; Ex. 1003 ¶ 56).

Patent Owner does not contest Petitioner's showing that Haley describes the subject matter set forth in limitation 1.4, and we find that Petitioner does so.

f. Limitation 1.5

Limitation 1.5 refers to the following text: "said movable piston is the sole movable piston in the gas pressure system." Ex. 1001, 39:21–22. Petitioner contends that, Haley describes a moving piston other than its piston 71, which moves within cylinder 76, namely piston 150. Haley's piston 150 pushes non-compressible fluid in reservoir 98 of large chamber 104. Pet. 15 (citing 4:62–67, Fig. 1; Ex. 1003 ¶ 57). However, Petitioner argues that Haley's piston 150 is not found within Haley's "gas pressure system" and thus does not violate the requirement that the movable

piston of limitation 1.1 is the “sole movable piston in the gas pressure system” as recited in limitation 1.5. *Id.* (citing Ex. 1003 ¶ 57).

Patent Owner argues that Petitioner’s showing for limitation 1.5 relies on an improper interpretation of “gas pressure system.” Prelim. Resp. 21–26. We rejected Patent Owner’s claim interpretation argument for the reasons stated in Part II.A.2 above. Patent Owner does not otherwise contest Petitioner’s showing that Haley describes the subject matter set forth in limitation 1.5, and we find that Petitioner does so.

g. Conclusion

For the reasons expressed above, we find that Petitioner has demonstrated a reasonable likelihood of proving that Haley anticipates claim 1.

2. Dependent Claims 7 and 8

Claims 7 and 8 each directly depends from claim 1. Ex. 1001, 39:47–53. Except as discussed above for claim 1, Patent Owner does not separately contest Petitioner’s showing that Haley anticipates dependent claims 7 and 8. Based on our review of Petitioner’s mapping of Haley to claims 7 and 8, we find that Petitioner has demonstrated a reasonable likelihood of proving that Haley anticipates claims 7 and 8.

3. Independent Claim 17

When making its showing that Haley anticipates claim 17, Petitioner largely cross-references its showing for claim 1. *See* Pet. 38 (asserting that limitations 17.P–17.4 are “identical” to limitations 1.P–1.4 and cross-referencing showing for limitations 1.P–1.4 and cross-referencing the showing for limitation 1.5 when arguing that Haley also describes materially similar limitation 17.5). Except as discussed above for claim 1, Patent

Owner does not separately contest Petitioner's showing that Haley anticipates independent claim 17. Based on our review of Petitioner's mapping of Haley to claim 17, we find that Petitioner has demonstrated a reasonable likelihood of proving that Haley anticipates claim 17.

4. Dependent Claim 20

Claim 20 directly depends from claim 17. Ex. 1001, 41:14–16. Except as discussed above for claim 17, Patent Owner does not separately contest Petitioner's showing that Haley anticipates dependent claim 20. Based on our review of Petitioner's mapping of Haley to claim 20, we find that Petitioner has demonstrated a reasonable likelihood of proving that Haley anticipates claim 20.

F. Claims 2–6, 9–16, 18, and 19: Obviousness in View of Haley and Lai

Petitioner argues that the combined teachings of Haley and Lai render claims 2–6, 9–16, 18, and 19 unpatentable as obvious. For the reasons that follow, we find that Petitioner demonstrates a reasonable likelihood of prevailing on this challenge.

1. Claim 2

Claim 2 depends directly from claim 1 and further recites:

[2.1] (a) a movable driver that is in communication with said piston, said movable driver including at least one protrusion; and

[2.2] (b) a lifter that causes said driver and said piston to move through a return stroke, by a mechanical engagement between said lifter and said at least one protrusion of the driver.

Ex. 1001, 39:24–30 (with Petitioner's bracketed labels to ease discussion).

Petitioner refers to the colorized version of Haley's Figure 1 that is discussed above when identifying the parts of Haley's power device 10 to which aspects of limitation 2.1 maps. More specifically, Petitioner contends

that the “movable driver” of limitation 2.1 maps onto Haley’s drive piston 18 and hammerhead 20 (orange in the colorized figure). Pet. 16 (citing Ex. 1004, 2:20–23, 5:51–70, 5:74–6:7, Figs. 1, 3, 4). Petitioner also concedes that Haley moves its “driver” hydraulically and thus Haley’s “driver” does not include the “at least one protrusion” of limitation 2.1 or the “lifter” recited in limitation 2.2. *Id.* at 16–17. Petitioner argues that it would have been “obvious to replace Haley’s hydraulic lifter with the claimed ‘lifter’ disclosed by [Lai], in which case the driver would have protrusions that are mechanically engaged by the lifter through its return stroke.” *Id.* at 17 (citing Ex. 1003 ¶¶ 58–68).

Petitioner relies on colorized versions of Fig. 12 of the ’007 patent and Figures 4A–4D from Lai presented side-by-side to illustrate how Lai describes an electrically-powered, mechanical lifting mechanism with a structure that is essentially identical to the “lifter member” disclosed in the ’007 patent. We reproduce Petitioner’s colorized figures below.

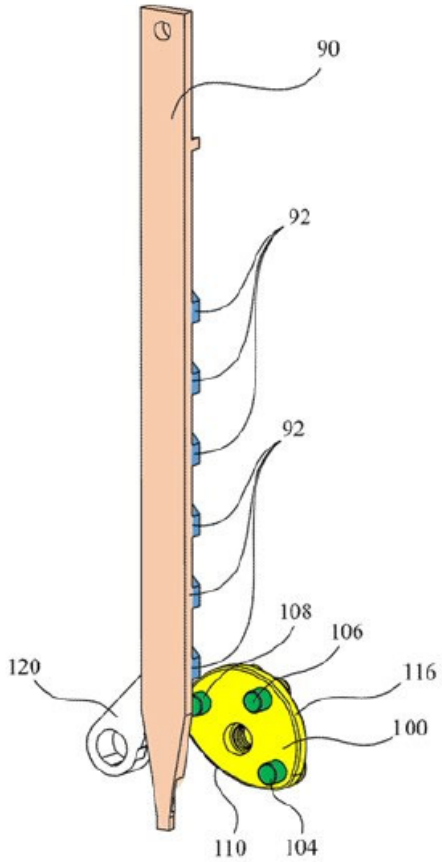
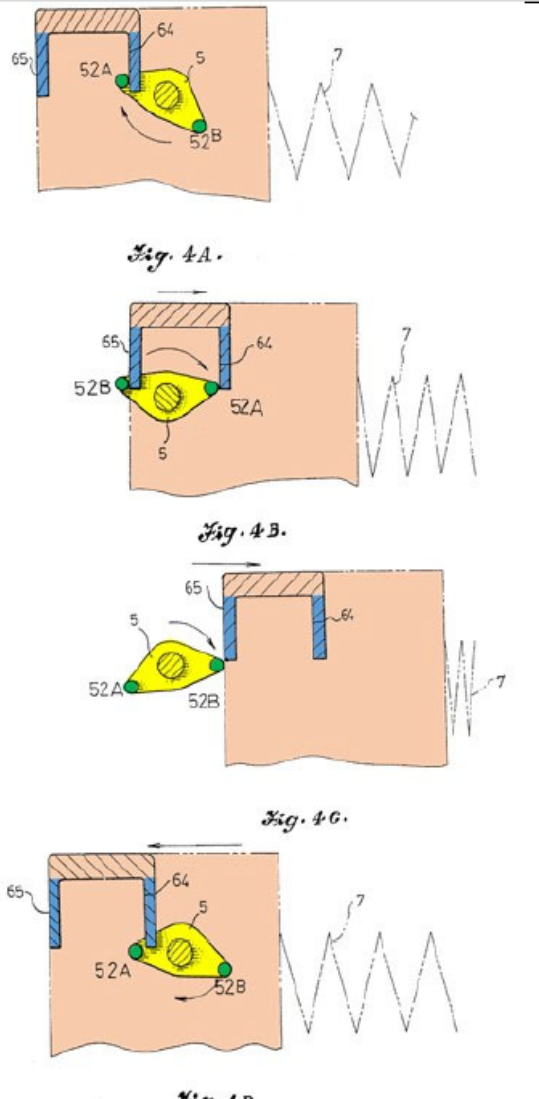
'007 Patent Lifter	Lai Lifter Member
 Fig. 12	 Fig. 4A. Fig. 4B. Fig. 4C. Fig. 4D.

Figure 12 from the '007 patent above left is a perspective view of a rotary-to-linear lifter. Ex. 1001, 6:1-3.

Lai's Figures 4A-4D are schematic side views illustrating the operation of a transmission mechanism. Ex. 1005, 1:53-54.

In the figure above left, the "lifter" of the '007 patent includes a rotatable cam lifter 100 (yellow), with pins 104, 106, and 108 (green) on its face surface that engage protrusions 92 (blue) on driver member 90 (orange). Pet. 17 (citing Ex. 1001, 9:36-52, 16:39-53, Fig. 12).

In the figure above right, Lai discloses the claimed lifter as its rotatable cam 5 (yellow), with pins 52A and 52B (green) on its face surface that engage two protrusions 64 and 65 (blue) from a U-shaped member 61 on hammer 6 (orange, i.e, the claimed “driver member”). *Id.* (citing Ex. 1005, 1:62–63, 2:14–25, Figs. 4A–D). Lai’s lifter member is moved by a prime mover (“motor 3”). Ex. 1005, 2:14–16, Fig. 2.

Patent Owner does not contest Petitioner’s showing that the combined teachings of Haley and Lai suggest the subject matter set forth in limitations 2.1 and 2.2, and we find that Petitioner does so.

In Dr. Vallee’s testimony cited by Petitioner, he details the way in which known driving tools evolved from Haley’s relatively cumbersome hydraulic nail gun to Lai’s portable electric stapler. *See* Ex. 1003 ¶¶ 62–68. He further explains why developments like Lai’s electrically driven cam drive appeared first in low-power staple guns and would later be applied to higher-power nail guns. *Id.* ¶ 62 (citing Ex. 1006, 4:1–3; Ex. 1011 ¶ 48). According to Dr. Vallee, an ordinarily skilled artisan “would look to Lai’s portable stapler design for improvements to incorporate into nailers such as Haley’s nail gun.” *Id.* Dr. Vallee opines that an ordinarily skilled artisan

would have been motivated to replace Haley’s hydraulic lifting mechanism with Lai’s lifter member. Haley’s hydraulic lifting mechanism is bulky and subject to the risk of hydraulic fluid leaking into the compressed gas chambers. This problem was explicitly discussed less than a decade later in U.S. Patent No. 3,636,707 (“the Saari ’707 patent,” Ex. 1012), which explained that “[t]he Haley devices are cumbersome, too heavy for prolonged use by an operator and subject to comingling of the noncompressible fluid with the compressible fluid or gas resulting in malfunctioning of the devices as well as having too long a time cycle between operative strokes thereof.” Ex. 1012, 1:12–16.

Ex. 1003 ¶ 63. He also details market trends occurring before the filing of the '007 patent toward replacing bulky pneumatic and hydraulic lifting mechanisms in driving tools with electrically powered mechanical lifting mechanisms. *Id.* ¶ 64 (citing Ex. 1006 generally; Ex. 1010, 1:27–30, 1:56–58). He also explains how Lai further refined electrically-driven mechanical lifting mechanisms in the prior art. *Id.* ¶ 65 (citing Ex. 1005 cover page, 1:9–10, 2:26–45).

After detailing all these market trends, Dr. Vallee opines that an ordinarily skilled artisan

would have solved Haley's problem by incorporating Lai's lifter member. Lai was a known solution to Haley's identified problem of being bulky (solved by Lai's use of a compact mechanical lifter member rather than a bulky hydraulic lifting mechanism, as well as due to Lai's improved design for its specific mechanical lifter member) and Haley's identified problem of being subject to the risk of hydraulic fluid leaking (solved by Lai's use of a mechanical lifter member rather than a hydraulic lifting mechanism).

Ex. 1003 ¶ 66. He also opines that an ordinarily skilled artisan would have reasonably expected to have been able to replace Haley's hydraulic lifting mechanism with Lai's electric lifting mechanism. *Id.* Lastly, Dr. Vallee testifies that an ordinarily skilled artisan would have been motivated "to replace Haley's hydraulic lifting mechanism with Lai's lifter member due to market forces and design needs favoring a portable, battery-powered nailer." *Id.* ¶ 67 (citing Ex. 1010, 1:6–31, 1:21–26; Ex. 1008, 1:9–44; Ex. 1009 ¶¶ 3–19).

Patent Owner does not dispute Dr. Vallee's testimony regarding the motive for replacing Haley's hydraulic lifting mechanism with Lai's electric

mechanism or that an ordinarily skilled artisan would have reasonably expected success in doing so. *See generally* Prelim. Resp.

For all the reasons expressed above, we find that Petitioner persuasively demonstrates a reasonable likelihood of proving that the combined teachings of Haley and Lai render claim 2 unpatentable as obvious.

2. Claims 3–6, 9–16, 18, and 19

Claims 3–6 ultimately depend from claim 2, and thus all recite the “lifter” and “driver.” Ex. 1001, 39:31–46. Independent claim 9 is directed to a “portable fastener driving tool” and recites the driver and lifter as follows: “a driver that is in communication with said piston at least during a drive stroke, a lifter that is in communication with said driver at least during a return stroke.” *Id.* at 39:57–60. Claim 9 also further recites other elements of the tool, including, for example, a prime mover and a source of energy. *Id.* at 39:60. Claims 10–13 ultimately depend from claim 9. *Id.* at 40:4–19. Independent claim 14 is also directed to a “portable fastener driving tool” and recites the driver and lifter as follows: “a driver that is in communication with said piston at least during a drive stroke, a lifter that is in communication with said driver at least during a return stroke.” *Id.* at 40:23–26. Claim 14 also further recites other elements of the tool, including, for example, a prime mover and a source of energy. *Id.* at 40:26. Claims 15 and 16 directly depend from claim 14. *Id.* at 40:42–50. Claim 18 directly depends from claim 17 and adds the “driver” and “lifter” in materially identical terms as they are introduced in claim 2, and claim 19 depends from claim 18. *Id.* at 41:1–13.

Petitioner identifies the portions of Haley and Lai that describe or suggest all the limitations recited within claims 3–6, 9–16, 18, and 19, oftentimes cross-referencing its showing for other claims reciting materially identical subject matter. Pet. 23–29 (claims 3–6), 31–38 (claims 9–16, 18, and 19). Except as discussed above for claim 1, Patent Owner does not separately contest Petitioner’s showing that the combined teachings of Haley and Lai renders dependent claims 3–6, 9–16, 18, and 19 unpatentable as obvious, and we find that Petitioner does so.

G. Other Challenges to Claims 1–20

Petitioner sets forth three other challenges that claims 1–20 are unpatentable as obvious over other prior art. We need not fully address these challenges to determine whether to institute review. Other than our preliminary thoughts on the meaning of “not vented to atmosphere” expressed in Part II.A.3 above, which is relevant to Petitioner’s challenge based on Kondo, we express no opinion on the strength or weakness of those challenges at this stage of the proceeding.

III. CONCLUSION

For the reasons expressed above, we determine that Petitioner has demonstrated a reasonable likelihood of showing that claims 1–20 of the ’107 patent are unpatentable. In accordance with the Court’s decision in *SAS Institute, Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018) and 37 C.F.R. § 42.108(a), we institute an *inter partes* review of all challenged claims of the ’007 patent on all grounds alleged by Petitioner.

This Decision does not reflect a final determination on the patentability of any claim. We further note that the burden remains on Petitioner to prove unpatentability of each challenged claim. *Dynamic*

Drinkware, LLC v. Nat'l Graphics, Inc., 800 F.3d 1375, 1378 (Fed. Cir. 2015).

IV. ORDER

For the reasons given, it is:

ORDERED that *inter partes* review of claims 1–20 of U.S. Patent No. 11,034,007 B2 is *instituted* with respect to all grounds of unpatentability set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of U.S. Patent No. 11,034,007 B2 is instituted commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is given of the institution of a trial.

IPR2025-00261
Patent 11,034,007 B2

PETITIONER:

Amol A. Parikh
Alexander P. Ott
McDERMOTT WILL & EMERY LLP
amparikh@mwe.com
aott@mwe.com

PATENT OWNER:

Robert S. Rigg
Daniel H. Shulman
VEDDER PRICE
rrigg@vedderprice.com
dshulman@vedderprice.com

Russell F. Gribbell
GRIBBELL LAW FIRM, LLC
russell@gribbelllaw.com