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Paper 21
Date: November 6, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ONE WORLD TECHNOLOGIES, INC., D/B/A/ TECHTRONIC INDUSTRIES POWER EQUIPMENT,
Petitioner,

v.

CHERVON (HK) LIMITED,
Patent Owner.

IPR2020-00886
Patent 9,826,686 B2

Before LINDA E. HORNER, BARRY L. GROSSMAN, and ALYSSA A. FINAMORE, *Administrative Patent Judges.*

HORNER, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background and Summary

One World Technologies, Inc., doing business as Techtronic Industries Power Equipment ("Petitioner"), filed a Petition ("Pet.") requesting *inter partes* review of claims 1–20 (the "Challenged Claims") of

U.S. Patent No. 9,826,686 B2 (Ex. 1001, "the '686 patent"). Paper 1. Chervon (HK) Ltd. ("Patent Owner"), filed a Preliminary Response ("Prelim. Resp.") to the Petition. Paper 11. After receiving our authorization to do so (*see* Paper 12), Petitioner filed a Motion to Update Mandatory Notices to Add Real Parties-in-Interest (Paper 13, "RPI Motion"). Patent Owner filed an Opposition to that Motion (Paper 16, "RPI Opposition"), and Petitioner filed a Reply to the Opposition (Paper 18, "RPI Reply").

We have authority under 35 U.S.C. § 314 to determine whether to institute review. *See also* 37 C.F.R. § 42.4(a) (permitting the Board to institute trial on behalf of the Director). To institute an *inter partes* review, we must determine that the information presented in the Petition shows "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) (2018). For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we institute an *inter partes* review.

B. Real Parties in Interest

Petitioner identifies itself as the real party-in-interest. Pet. 1.[1] Patent Owner identifies itself and Chervon North America Inc., an exclusive licensee of the '686 patent, as real parties-in-interest. Paper 5, 1.

[1] In its RPI Motion, Petitioner seeks authorization to update its mandatory notices to add three real parties-in-interest without changing the filing date of the Petition. RPI Motion, 1 (seeking "to identify Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc., as real parties-in-interest without admitting that they are, in fact, real parties-in-interest"). We address the RPI Motion in Section II.C, below.

C. Related Matters

The parties identify *Chervon (HK) Limited v. One World Technologies, Inc.*, No. 1:19-cv-01293-LPS (D. Del. filed July 11, 2019), as a matter related to the '686 patent. Pet. 1; Paper 5, 1. Petitioner identifies U.S. Patent Nos. 9,060,463 B2; 9,596,806 B2; 9,986,686 B2; 10,070,588 B2; 10,477,772 B2; 10,485,176 B2; and 10,524,420 B2 as related patents also involved in the district court litigation. Pet. 1. Petitioner indicates that it filed *inter partes* review and post-grant review petitions challenging the seven related patents, and an unrelated patent (U.S. Patent No. 9,648,805 B2).[2] *Id.*; *see also* Paper 5, 1 (identifying IPR2020-00884, IPR2020-00887, IPR2020-00888, PGR2020-00059, and PGR2020-00060 as proceedings before the Board "that may affect or be affected by a decision in th[is] proceeding[]").

D. The '686 Patent

The '686 patent, titled "Gardening Tool," issued November 28, 2017, from an application filed August 29, 2016, and claims priority under 35 U.S.C. § 120 to Application No. 14/511,490, filed on October 10, 2014, now U.S. Patent No. 9,496,806 B2. Ex. 1001, codes (54), (45), (22), (63).[3] The '686 patent also claims priority to foreign patent applications filed October 10, 2013, and April 23, 2014. *Id.* at code (30). The '686 patent

[2] These petitions are IPR2020-00883, IPR2020-00884, IPR2020-00887, IPR2020-00888, PGR2020-00059, PGR2020-00060, PGR2020-00061, and IPR2020-00885, respectively.

[3] It is our understanding that the '686 patent was examined under the first inventor to file provisions of the America Invents Act (AIA). *See* IPR2020-00884, Ex. 1002, 390 (Examiner reviewing parent application as such). Petitioner asserts, and Patent Owner does not deny, that the '686 patent claims priority to an application with a foreign filing date after March 16, 2013. Pet. 4; Prelim. Resp. 2.

relates to gardening tool, such as a lawnmower, having a control system that is capable of preventing the gardening tool from operating when its handle is in an improper position. *See id.* at 1:19–58. A handle typically separates a user from the dangers posed by the rotating blade in the main body of the tool. *Id.* at 1:27–29. The ’686 patent states that, “[w]hen the handle is in a state of abnormal use, even if the operation assembly on the handle for normally starting operation of the tool is misoperated, the motor and the functional accessory are not driven, and thereby ensure the user’s safety and prevent occurrence of danger.” *Id.* at 1:58–62.

We reproduce Figures 1 and 2 from the ’686 patent below.

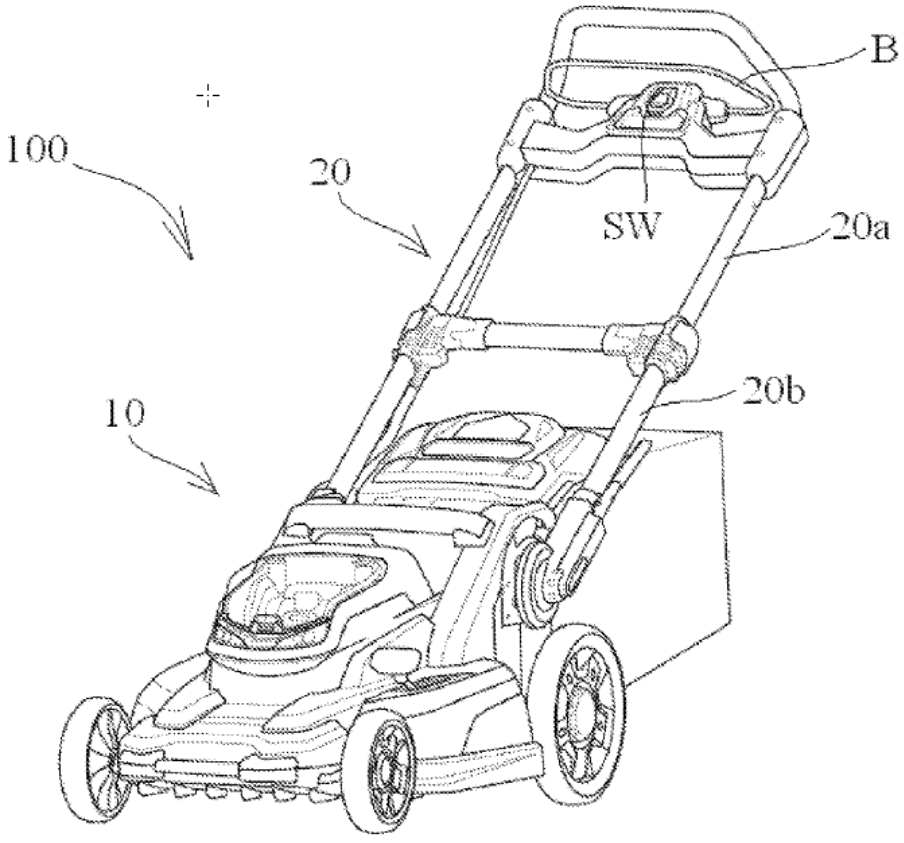


FIG.1

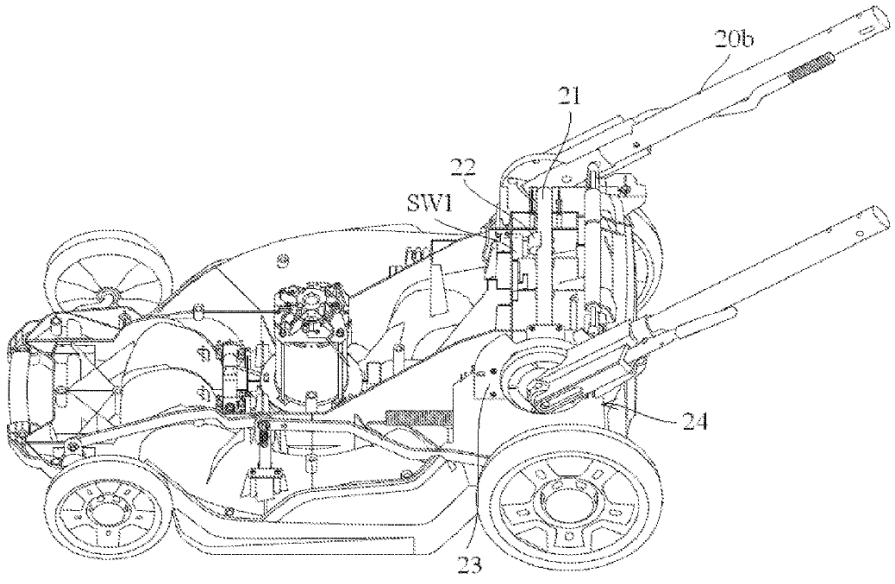


FIG.2

Figures 1 and 2 depict schematic views of an exemplary gardening tool. Ex. 1001, 2:3–5. Mower 100 includes main body 10 and handle 20, which is rotatably connected to main body 10. *Id.* at 2:38–40. The end of handle 20 closest to the user includes an operation assembly, which includes trigger B. *Id.* at 2:55–60.

The user operates trigger B to start and stop the motor of mower 100. Ex. 1001, 2:60–62. The control system of mower 100 includes switch SW, which is a contact switch controlled by trigger B. *Id.* at 6:29–33. Switch SW "is connected in series in the power supply circuit." *Id.* at 6:30–31.

The control system locks out operation of the motor, so that the motor cannot start, if handle 20 is rotated out of its designated position. Ex. 1001, 5:24–29. "The advantage of this configuration is that when the handle 20 does not rotate to the designated position . . . even though the user . . . inadvertently pulls the trigger B, the motor is locked and cannot be started,

thereby preventing accidental movement from causing injury to the user's body." *Id.* at 5:30–37.

The control system of mower 100 also includes SW1, which is a contact switch located on main body 10 near where handle 20 connects to main body 10. Ex. 1001, 6:59–62, Fig. 2. When handle 20 is rotated into a designated operational position, the handle rotates shaft 21, causing trigger member 22 to trigger SW1. *Id.* at 6:65–7:2. When handle 20 rotates out of the designated position, SW1, connected in series to the power supply circuit, locks out operation of trigger B and switch SW from starting the motor. *Id.* at 6:44–48.

Handle 20 includes telescoping tubes 20*a* and 20*b*. Ex. 1001, Fig. 1. The control system of mower 100 includes a control device that monitors the telescopic position of handle 20. *Id.* at 7:19–23. When handle 20 is telescoped into a designated position, switch SW2, disposed on tube 20*b*, is contacted by trigger member 20*a*′ on tube 20*a*, operating SW2. *Id.* at 7:41–51. SW2 is connected to the power supply circuit in series. *Id.* at 7:52–54. When handle 20 is not telescoped in the designated position, such as when it is at least partially collapsed, then SW2 is disengaged, locking operation of trigger B and switch SW. *See id.* at 7:26–29.

"When one of the contact switch SW1 and the contact switch SW2 switches off, no matter whether the contact switch SW is triggered by the trigger B to be in an off or on state, the power supply circuit cannot . . . provide electrical energy to the motor." Ex. 1001, 7:54–60. In this way, trigger B and switch SW are locked by SW1 or SW2. *Id.*

Mower 100 also includes a brake system that physically contacts the rotating blade of mower 100 to stop its rotation. Ex. 1001, 7:63–65. The

brake is triggered when mower 100's control system stops the mower's engine. *Id.* at 7:65–67.

E. Illustrative Claims

Of the Challenged Claims, claims 1 and 11 are independent. Claim 1 is representative, and we reproduce it, below.

> 1. A gardening tool, comprising:
>
> a main body having at least a functional accessory and a motor for driving the functional accessory;
>
> a handle rotatably connected to the main body, having at least one operation assembly for being operated by a user to control the motor when the handle is located in a secure position;
>
> a locking mechanism for locking the rotating position of the handle;
>
> a locking member configured to engage with the locking mechanism and providing at least a locking structure to cause the locking mechanism to keep the handle at an accommodating position relative to the main body when the gardening tool is not being used; and
>
> a control system capable of preventing the motor from being controlled by the operation assembly and halting the motor when the handle is out of the secure position, the control system comprising:
>
> a first control device configured to be controlled by the operation assembly; and
>
> a second control device configured to be controlled according to the rotating position of the handle wherein, when the handle rotates to a designated position relative to the main body, the second control device unlocks the first control device so that the first control device allows starting of the motor, and, when the handle rotates to the accommodating position relative to the main body, the second control device locks the first control device so that the first control device is not allowed to start the motor; and

> wherein the second control device comprises at least one of a switch connected to the power supply circuit and a signal source device for sending a control signal to control the motor.

Ex. 1001, 8:19–52.

F. Prior Art and Asserted Grounds

Petitioner asserts that the Challenged Claims are unpatentable based on two grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1–7, 11–17	103	Outils,[4] Roelle,[5] Matsunaga[6]
8–10, 18–20	103	Outils, Roelle, Matsunaga, Langdon,[7] Nakano[8]

Petitioner relies on declaration testimony of Mr. E. Smith Reed (Ex. 1003) in support of these grounds.

The following subsections provide a brief description of the asserted prior art references.

1. Outils

Outils, titled "Lawnmower Comprising a Safety Device for Preventing Access to the Rotating Cutting Blade," published March 19, 1999. Ex. 1014, codes (54), (43). Outils is primarily directed to a safety device that prevents access to a lawnmower's rotating blade when removing a receptacle that receives cut grass. *Id.* at 2:3–37. Relevant to this Decision,

[4] Outils Wolf Societe Anonyme, FR 2 768 300 A1, published Mar. 19, 1999 (Ex. 1014, "Outils"). Ex. 1014 is a certified English translation of Ex. 1013. *See* Ex. 1013; Ex. 1014, 26 (providing certification).
[5] Roelle, US 4,753,062, issued June 28, 1988 (Ex. 1011, "Roelle").
[6] Matsunaga et al., US 8,098,036 B2, issued Jan. 17, 2012 (Ex. 1006, "Matsunaga").
[7] Langdon, US 5,209,051, issued May 11, 1993 (Ex. 1012, "Langdon").
[8] Nakano et al., WO 2013/122266 A2, published Aug. 22, 2013 (Ex. 1015, "Nakano").

Outils discloses an embodiment that includes a safety device that stops the motor and/or decouples and brakes the cutting blade if the handlebar of the lawnmower is tilted forward. *Id.* at 8:22–29.

We reproduce Outils's Figures 1 and 10, below.

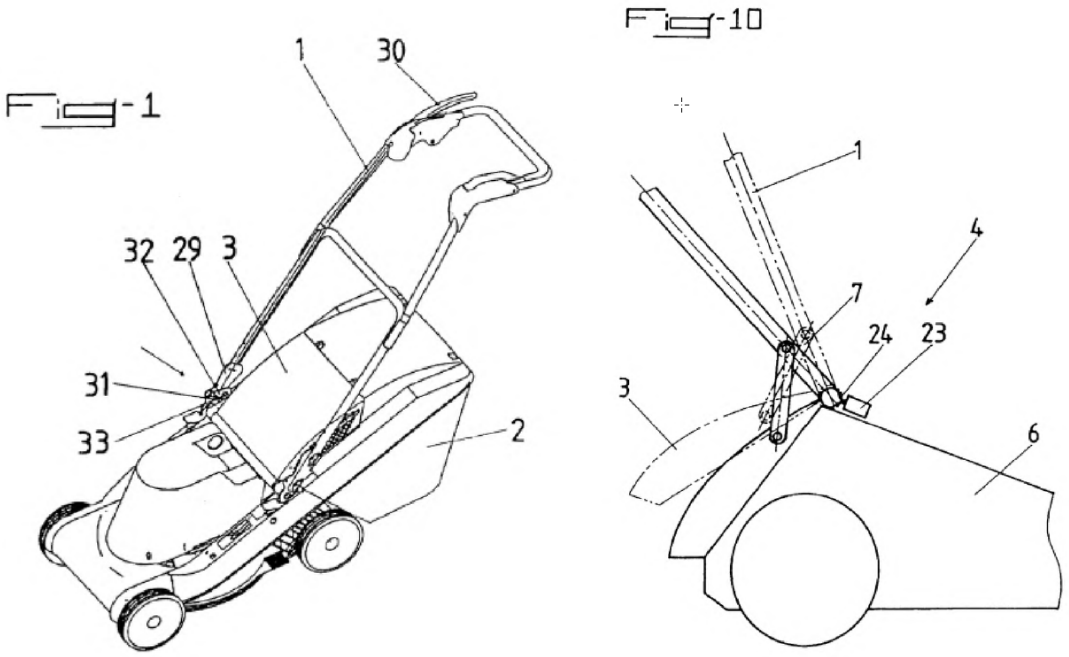


Figure 1 depicts "a perspective view of a mower," and Figure 10 depicts a "partial schematic view[] showing [an] embodiment[] of the cutting-blade activation means" for a mower. Ex. 1014, 3:5–6, 3:22–23. Outils's lawnmower includes handlebar 1, cut-grass receiving receptacle 2, and safety cover 3. *Id.* at 3:35–4:3. In the embodiment of Figure 10, link 7 connects handlebar 1 with cover 3. *Id.* at 5:33–36.

Remote control cable 29 acts on a motor brake, a brake coupling, or an electrical supply contactor, and is actuated by hold-to-run control component 30, such as a handle, a lever, a bow, or the like, provided on handlebar 1. Ex. 1014, 4:5–8. In this way, cable 29, in conjunction with other components, controls the mower's cutting blade. *Id.* at 4:5–12.

> Thus, when the control is not actuated, for example when the user is getting ready to empty the cut-grass receiving receptacle 2, the cable 29 is released and the driving of the blade is interrupted, either by cutting the power to the motor or by interrupting the drive of the spindle of the blade by acting on a brake and/or a coupling.

Id. at 4:14–17.

In the embodiment of Figure 10, actuator 23 is acted upon by cam 24 when handlebar 1 is tilted forward, and operates independent of cover 3. Ex. 1014, 8:25–27. This action stops the motor or brakes or decouples the cutting blade. *Id.* at 8:27–29. Actuator 23 is "similar to actuator 20 and [is] preferably of the all-or-nothing type, that is to say that [it] allow[s] the controlled element to be restarted only after [it has] been interlocked again as a result of [its] control component returning to the in-use position." *Id.* at 9:10–13; *see also id.* at 7:25–29 ("[A]ctivation actuator 20 can be an electrical supply cut-off switch for an electric motor . . . . In the case of mowers equipped with a decouplable blade, the activation actuator 20 can be in the form of a mechanical device that acts on the blade-driving coupling.").

2. Roelle

Roelle, titled "Lawn Mower and Safety Control Therefor," issued June 28, 1988. Ex. 1011, codes (54), (45). Roelle is directed primarily to a lawn mower having a cuttings bag closed with a pivotal cover and an engine shut off control that ensures that the blade does not continue to rotate when the cuttings bag cover is opened. *Id.* at 1:65–2:1. Relevant to this Decision, Roelle discloses a handle pivotally connected to the mower deck having means for securing alternatively the position of the handle in the rearward, cutting position or in the vertical position, when the handle is moved out of the way to empty the cuttings bag. *Id.* at 2:10–14.

We reproduce Roelle's Figures 1, 1A, and 2 below.

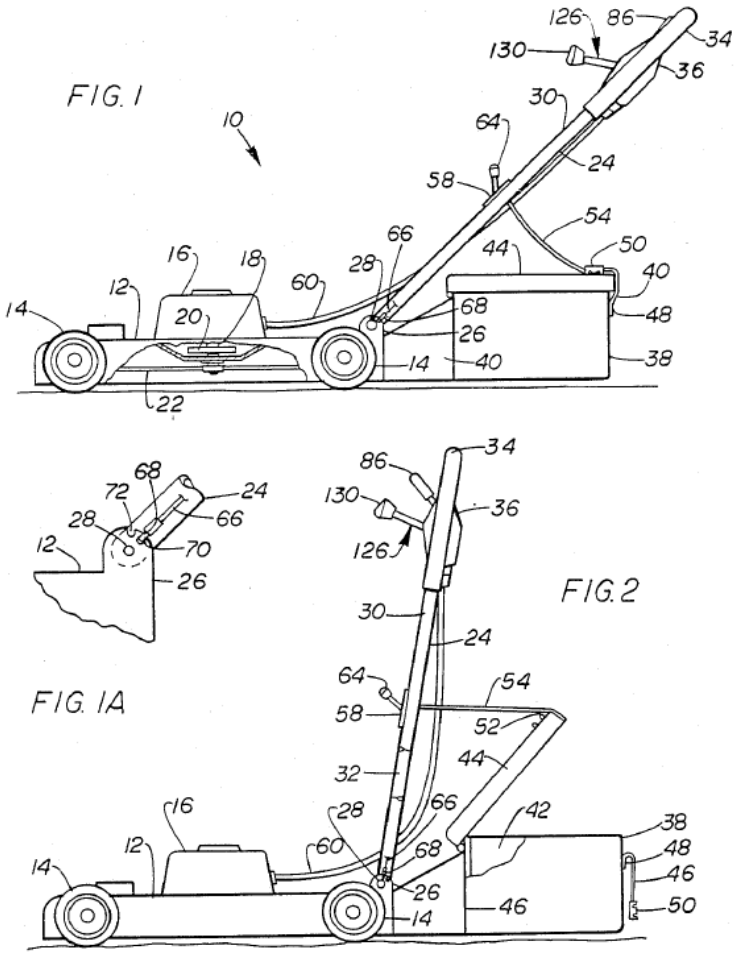


Figure 1 depicts "a side elevation" of a mower with the handle in the rearward, cutting position and the cuttings bag cover closed, and Figure 2 depicts "a side elevation" of the mower with the handle moved to the vertical position and the cuttings bag cover open. Ex. 1011, 3:1–8. Figure 1A is a partial view of the handle securing mechanism. *Id.* at 3:3–4.

Roelle's mower 10 includes deck 12 and U-shaped handle 24 having legs 30 and 32 pivotally mounted to lugs 26 extending upwardly at each side of deck 12 by pins 28. *Id.* at 3:30–43. Roelle's mower 10 also includes lever 64, which is pivotally mounted on brace 58 and operates cable 66, which extends to handle latching pin 68. *Id.* at 3:67–4:1. Pin 68 is biased

toward lug 26 to engage within one of recesses 70 or 72 in lug 26 to retain handle 24 in its rearward, cutting position, as shown in Figure 1, or its vertical position, as shown in Figure 2. *Id.* at 4:1–5.

3. Matsunaga

Matsunaga, titled "Electric Power Tool," issued January 17, 2012. Ex. 1006, codes (54), (45). Matsunaga is directed to "a rechargeable grass mower," that includes a contact switch that can interrupt the current path to the mower's engine in the case of a short circuit fault in a semiconductor switch. *Id.* at 1:38–41, 4:53–55, 6:34.

We reproduce Matsunaga's Figures 1 and 2, below.

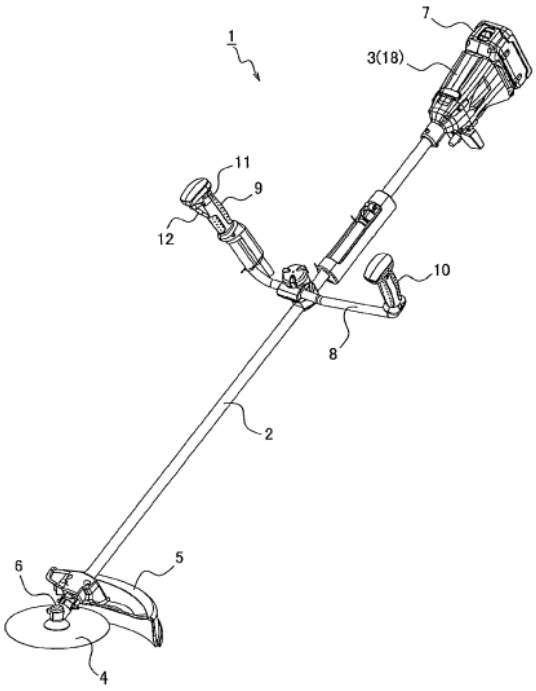


FIG. 2

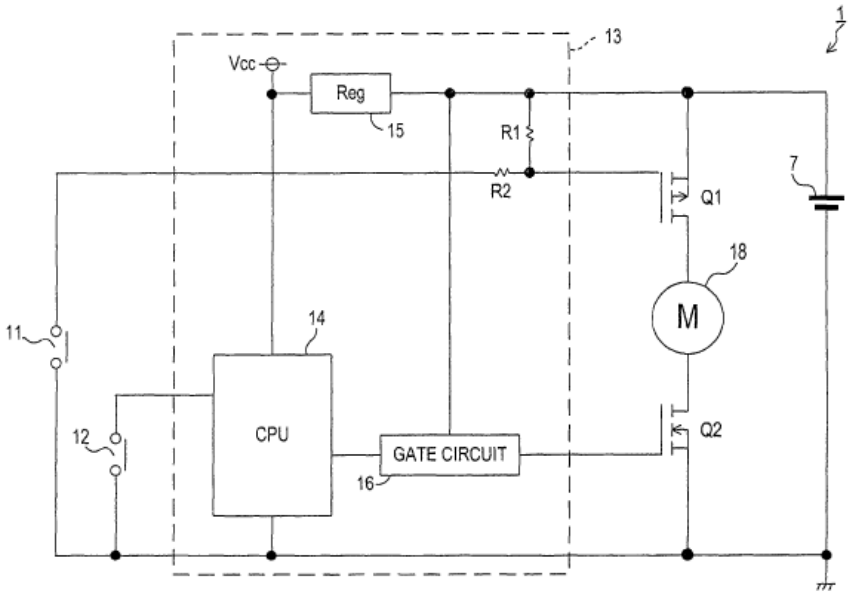


Figure 1 depicts "a perspective view showing an overall appearance of a rechargeable grass mower," and Figure 2 depicts "an electrical circuit diagram showing a configuration of the rechargeable grass mower" of Figure 1. Ex. 1006, 6:6–10. Motor unit 3 of rechargeable grass mower 1 includes motor 18 and control circuit 13, which controls the application of current to the motor. *Id.* at 6:40–44. Handgrip 9 includes two user controlled switches—contact lock-off switch 11 and trigger switch 12. *Id.* at 6:64–66. "The user can turn ON the respective switches 11, 12, for example, by depressing the lock-off switch 11 with a thumb and drawing the trigger switch 12 with an index finger." *Id.* at 6:66–7:2.

As seen in Figure 2, switches 11 and 12 control semiconductor switches Q1 and Q2, respectively. Ex. 1006, 9:3–17, Fig. 2. Semiconductor switches Q1 and Q2 are located in the main current path between battery 7 and motor 18. *Id.* at 9:27–29, Fig. 2. Switches 11 and 12 are not in the main current path, allowing the switches to have small contact capacity and the associated wiring to be thin and light. *Id.* at 9:56–64.

4. Langdon

Langdon, titled "Lawn Mowers Including Push Handles," issued May 11, 1993. Ex. 1012, codes (54), (45). Langdon is directed to a rotary lawn mower with handles that can also function as lift handles. *Id.* at 1:7–10.

We reproduce Langdon's Figure 5, below.

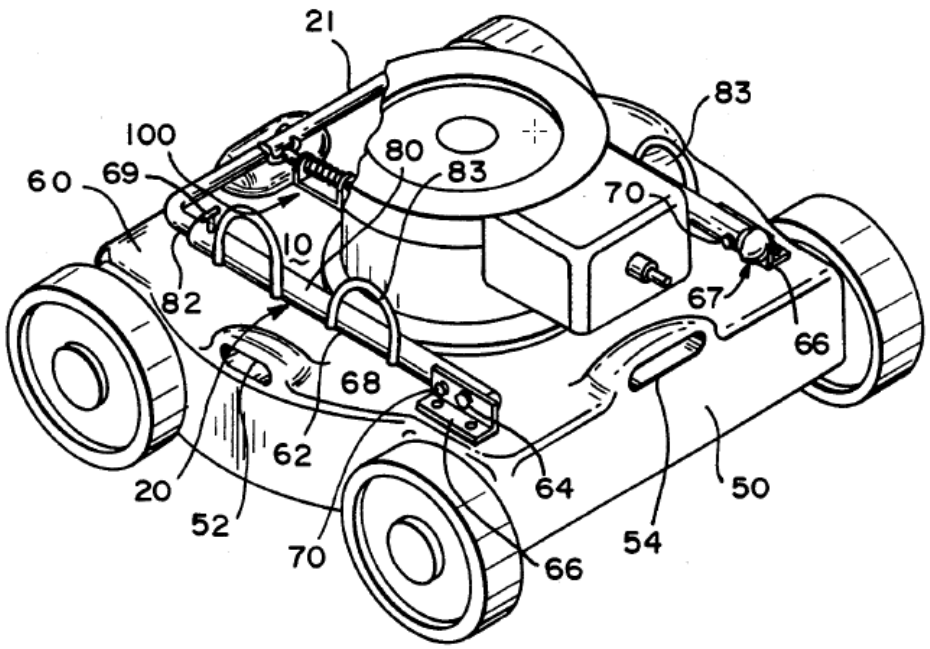


FIG. 5

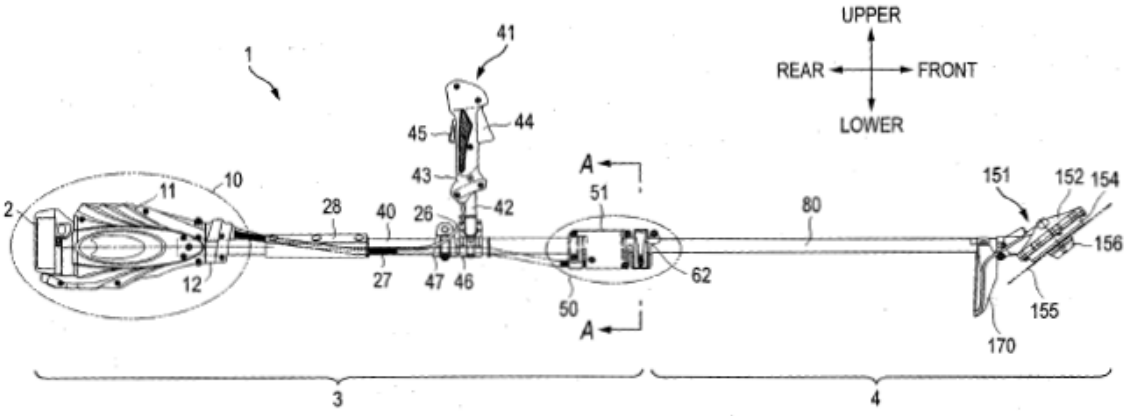
Figure 5 depicts "a perspective view of an[] embodiment . . . wherein the push handles [of the lawnmower] fold over the mower." Ex. 1012, 1:62–64. Relevant to this Decision, Langdon discloses that its push handles telescope. Push handles 20 include tubular portion 62 and tubular portion 82, "which [is] telescoped upwardly and inwardly into tubular member 62." *Id.* at 4:1–15. As such, "the upper push handle portion 82 is pushed into lower member 62 thereby shortening the overall length of the push handles

attached to the deck 10." *Id.* at 4:16–18. Means 69, such as a spring biased pin, locks the handles in an extended, operating position. *Id.* at 4:6–8.

5. Nakano

Nakano, titled "Electric Working Machine," published August 22, 2013. Ex. 1015, codes (54), (43). "An object of [Nakano's invention] is to realize an electric working machine, [such as an electric bush cutter], which is provided with an electronic brake to quickly stop a motor." *Id.* at 3.[9] We reproduce Nakano's Figures 1 and 2, below.

FIG. 1



[9] When we refer to Nakano, we reference the pagination of the publication, not the exhibit pagination provided by Petitioner.

FIG. 2

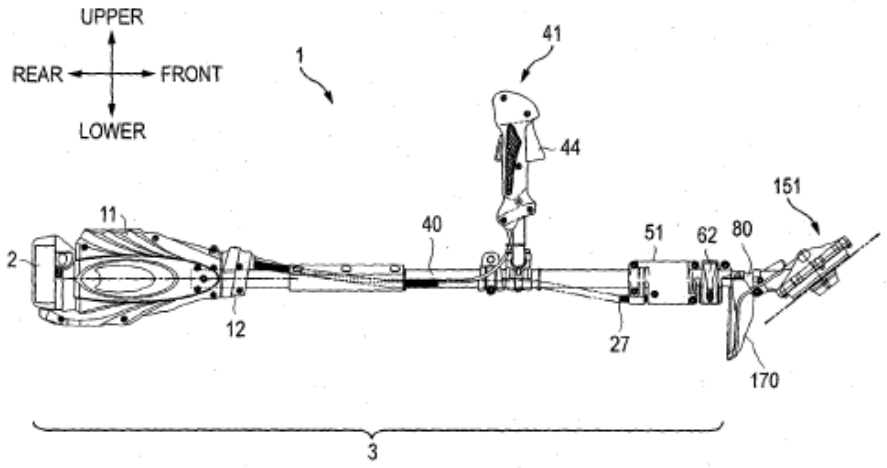


Figure 1 depicts "a side view showing the whole of an electric bush cutter . . . , in which a rod is in an extended state," and Figure 2 depicts the same cutter, with the rod retracted. Ex. 1015, 5–6. Relevant to this Decision, Nakano discloses that its cutter includes a retractable rod to allow for a more compact size to store and transport the cutter. *Id.* at 12. Cutter 1 includes operation unit 10 with a contracting rod attached. *Id.* at 7. The contracting rod includes fixed pipe 40 and movable pipe 80, which extends into and out of pipe 40. *Id.* The position of pipe 80 is fixed relative to pipe 40 with holder 51, such that pipe 80 can extend to different positions, but is intended to operate when in the fully extended positon. *Id.* at 9. Driving unit 151 includes a motor that drives cutting blade 155. *Id.* at 10.

"[H]older 51 is provided with an extending detection unit . . . , and thus the driving unit 151 is configured not to be operated when the movable pipe 80 is not fully extended (e.g., a non-extended state)." Ex. 1015, 9. "The extending detection unit detects positions or states of the movable pipe 80 by any detecting methods, such as electrical, mechanical, or optical method and output the corresponding electric signals to a control unit

(controller)." *Id.* at 18; *see also id.* at Figs. 4, 5 (depicting holder 51 with microswitch 55 used to detect the extension of pipe 80), Fig. 8 (depicting flow chart for controlling the cutter).

II. PROCEDURAL CONSIDERATIONS

A. Our Discretion under 35 U.S.C. § 314(a)

The Board has discretion not to institute an *inter partes* review. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); 37 C.F.R. § 42.108(a) (stating "the Board *may* authorize the review to proceed") (emphasis added); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion."); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). Patent Owner contends that we should exercise that discretion and not institute trial because of the state of the parallel district court litigation. Prelim. Resp. 24–27.

Our precedential and informative decisions make clear that the Board may exercise discretion to not institute an *inter partes* proceeding in light of the advanced state of ongoing, parallel litigation. *See NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential) ("*NHK Spring*") and *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv I*"); *see also Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 (PTAB May 13, 2020) (informative) (denying institution in light of an ongoing, parallel district court proceeding) ("*Fintiv II*"); *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 (PTAB June

16, 2020) (informative) (applying *Fintiv I* factors in light of ongoing, parallel district court litigation and instituting trial). These decisions promote efficient use of resources and the integrity of the patent system by avoiding potentially conflicting decisions. *See, e.g.*, *Fintiv I*, Paper 11 at 6 ("[T]he Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.").

In *NHK Spring*, the Board considered the advanced state of a parallel district court proceeding as a factor favoring denial of institution of an *inter partes* review proceeding. *NHK Spring*, Paper 8 at 19–20. The Board later identified a non-exclusive list of factors to consider when applying *NHK Spring* to determine if we should exercise discretion to not institute an *inter partes* review in light of a parallel proceeding in an advanced state. *Fintiv I*, Paper 11 at 5–6. We address Patent Owner's arguments as to each factor in turn.[10]

Factor 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

Patent Owner argues that Petitioner has not sought a stay in the parallel litigation. Prelim. Resp. 26.

We weigh this factor as neutral. The record does not include any evidence showing the likelihood, or unlikelihood, of the District Court granting a stay if requested. We will not speculate as to whether the District Court would stay the parallel litigation in light of us instituting this proceeding.

[10] In an Order, we determined that we would not benefit from additional briefing by Petitioner on this issue. Paper 12, 3–4.

Factor 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision

Patent Owner argues that the "Board's statutory deadline for a final written decision in this action (November 11, 2021) is only several months before the anticipated trial date in the District Court [l]itigation." Prelim. Resp. 26 (referencing Ex. 2002 (Scheduling Order in the District Court litigation setting jury trial to being on March 7, 2022)).

We weigh this factor against exercising discretion to deny institution. As Patent Owner admits, a final written decision in this proceeding would predate any trial in the parallel litigation by at least several months. Thus, the efficiency and system integrity concerns that animate the *Fintiv I* analysis are not present in this circumstance.

Factor 3. investment in the parallel proceeding by the court and the parties.

Patent Owner argues that "the Court and the parties will have already invested substantial resources into the District Court [l]itigation by the time the Board is due to issue its final written decision." Prelim. Resp. 26.

We weigh this factor in favor of us not exercising discretion. Patent Owner's argument about work to be completed in the District Court litigation post-institution is not convincing. *Fintiv I* states that at the time of the institution decision we are to consider the "type of work already completed" and explains that the "investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs." *Fintiv I*, Paper 11 at 9–10. Here, the parallel proceeding is still in its early stages. *See, e.g.*, Ex. 2002, 4 (indicating document production ends January 5, 2021 and fact discovery

ends March 2, 2021). Under the schedule supplied by Patent Owner, the court was scheduled to hold a hearing on claim construction on September 8, 2020. *Id.* at 11. It does not appear from the information available in our record that the court has issued a claim construction order yet, and Patent Owner has not indicated otherwise. Also, expert discovery will not be completed until June 23, 2021. *Id.* at 6. Initial briefing for dispositive motions are not due until August 2021, with the associated hearing not scheduled until November 2, 2021. *Id.* at 11–12.

Although we recognize that the parties and District Court have made some investment in the parallel litigation, that investment to date is small. Accordingly, we weigh this factor against exercising discretion to deny institution.

Factor 4. overlap between issues raised in the petition and in the parallel proceeding.

Patent Owner argues that "the issues raised in the Petition directly overlap with the invalidity arguments presented in the District Court [l]itigation." Prelim. Resp. 26. Patent Owner adds that "Petitioner identified every reference upon which it relies in the Petition as part of its [i]nvalidity [c]ontentions in the District Court [l]itigation." *Id.* (referencing Ex. 2003).

We weigh this factor as neutral. At this early stage of the parallel litigation, Petitioner's invalidity contentions are a list of prior art for the '806 patent and its related family members, including the '686 patent. *See* Ex. 2003, 4–5. This initial listing provides little insight as to what Petitioner's actual invalidity arguments will be at trial, including the role of prior art products, which cannot support patentability arguments before the Board. *See id.* at 5–6; *see also* Ex. 2002, 4 (identifying the due dates for Patent Owner's final infringement contentions and Petitioner's final

invalidity contentions as after the due date of this Decision (November 11, 2020)). Still, we acknowledge that Petitioner likely chose what it considers as strong prior art grounds to assert in the Petition.

Factor 5. whether the petitioner and the defendant in the parallel proceeding are the same party.

Petitioner is also the defendant in the parallel litigation. *See* Pet. 1. As we explain above, however, we are likely to reach the merits before the District Court so that estoppel will apply against Petitioner should we determine that Petitioner failed to demonstrate the unpatentability of the challenged claims. Because Petitioner is the same party in both the parallel proceeding and this proceeding, and we are likely to reach the merits before the District Court case, we weigh this factor against exercising discretion to deny trial.

Factor 6. other circumstances that impact the Board's exercise of discretion, including the merits.

Patent Owner argues that the weakness in Petitioner's unpatentability arguments warrants our discretionary denial. Prelim. Resp. 27.

We weigh this factor as neutral. On the current record, we do not agree with Patent Owner that Petitioner's unpatentability arguments are weak. As we discuss in detail below, we determine that the information in the Petition shows that Petitioner has a reasonable likelihood of prevailing as to all Challenged Claims.

Determination

In weighing the *Fintiv I* factors, we do not merely treat them as a scorecard, totaling up the individual outcomes. Instead, we take a holistic view of the factors. *See, e.g.*, *Fintiv II*, Paper 15 at 17 ("On balance, these facts, when viewed holistically, lead us to determine that efficiency is best served by denying institution."). After weighing all of the factors and taking

a holistic view of the relevant circumstances of this proceeding, we determine that exercising our discretion to deny institution under 35 U.S.C. § 314(a) because of the parallel litigation proceeding is not warranted.

We weigh heavily that fact that the parallel litigation is in the early stages, including the fact that a trial, at the earliest, would not begin until several months after we issue a final written decision. Also, because of the early stage of the litigation, the investment in the parallel proceeding to date is small and the degree of overlap at this stage is difficult to discern. These facts favor a determination that instituting this proceeding would be an efficient use of resources and that the likelihood that our final written decision may affect the integrity of the patent system through a potentially conflicting decision is low.

B. Our Discretion under 35 U.S.C. § 325(d)

Patent Owner contends that we should exercise our discretion under 35 U.S.C. § 325(d) to deny the Petition, applying our precedential decisions in *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 (PTAB Feb. 13, 2020) (precedential) ("*Advanced Bionics*") and *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) ("*Becton, Dickinson*"). Prelim. Resp. 8–9. Specifically, Patent Owner argues that "[t]he primary reference Petitioner uses in all four grounds—Outils—has already been expressly considered . . . during prosecution of the ['686 patent." *Id.* at 8. Petitioner also argues that the secondary references relied on in the Petition are cumulative of prior art evaluated during prosecution. *Id.* at 13–19. For the reasons provided below, we do not exercise our discretion to deny institution under § 325(d).

1. Applicable Framework

Section 325(d) provides that, in determining whether to institute an *inter partes* review, "the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office." 35 U.S.C. § 325(d) (2018). The Board uses a two-part framework in determining whether to exercise its discretion under § 325(d), specifically:

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and
>
> (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, Paper 6 at 8.

In applying the two-part framework, we consider several non-exclusive factors from *Becton, Dickinson*, which provide "useful insight into how to apply the framework" (*Advanced Bionics*, Paper 6 at 9): (a) the similarities and material differences between the asserted art and the prior art involved during examination; (b) the cumulative nature of the asserted art and the prior art evaluated during examination; (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art; (e) whether Petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments. *Becton, Dickinson*, Paper 8 at 17–18. If, after review

of factors (a), (b), and (d), we determine that the same or substantially the same art or arguments previously were presented to the Office, we then review factors (c), (e), and (f), which relate to whether the petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims. *Advanced Bionics*, Paper 6 at 10.

2. Analysis

We start our analysis with a review of the prosecution history of the '686 patent.

a) Prosecution History of the '686 patent

The application that matured into the '686 patent was filed August 29, 2016, with 20 original claims, with claims 1 and 11 as independent claims. Ex. 1002, 232–308. The applicant included an Information Disclosure Statement with the application filing. *Id.* at 267–292. Relevant to our inquiry, this IDS cited a single reference—EP 0903074 A1 to Wolf Outils ("Outils EP"). *Id.* at 267. With this IDS, the applicant provided 1) the first page of the French-language Outils EP (*id.* at 272), 2) a bibliographic data sheet with an English version of the Outils EP abstract (*id.* at 273), and 3) a machine English translation of Outils EP (*id.* at 274–292). Except for Figure 1, which appears on the first page of Outils EP and the bibliographic data sheet, no figures were included in the applicant's IDS submission. The applicant later filed a second IDS that included 15 additional references. *Id.* at 94–218.

The examiner then issued a first Office Action Notice of Allowance, which included a Notice of References cited by the examiner and an indication that the examiner had considered both IDS submissions. Ex. 1002, 22–44; *see id.* at 40 (examiner indicating consideration of Outils EP).

b) Part One of the Advanced Bionics *framework*

Under the first part of the *Advanced Bionics* two-part framework, we determine "whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office." *Advanced Bionics* at 8. We look to *Becton, Dickinson* factors (a), (b), and (d) to inform our analysis. *Advanced Bionics* at 9–10.

(1) Becton, Dickinson Factor (a)

Factor (a) under the *Becton, Dickinson* construct looks at "the similarities and material differences between the asserted art and the prior art involved during examination." *Advanced Bionics*, Paper 6 at 9 n.10. Patent Owner states that "[t]here is no dispute that Patent Owner disclosed Outils during examination." Prelim. Resp. 12. Patent Owner argues that the disclosed reference (Outils EP) is the European counterpart to Outils and that Outils EP and Outils "share a virtually identical specification." *Id.* at 12–13. Patent Owner states that the examiner marked that Outils EP was considered. *Id.* at 13. Patent Owner does not argue that any of the other references relied on in the Petition were before the examiner.

Petitioner argues that "Patent Owner submitted only a machine translation of Outils'[s] French-language EP0903074A1 and withheld Outils'[s] drawings." Pet. 28. That is, a complete version of Outils EP was not considered by the examiner.

As to Outils, we find that Petitioner has the better argument. Outils is not the same or substantially the same reference as the version of Outils EP submitted to the examiner. Although the examiner had a complete English translation of Outils EP's specification, which describes Figure 10, on which

Petitioner primarily relies, the examiner was not provided with Figure 10 itself. *See* Ex. 1002, 327.

Figure 10 is key to the relevance of Outils because it illustrates how, in response to moving Outils's handlebar 1, cam 24 interacts with actuator 23. *See* Ex. 1014, Fig. 10. As such, Figure 10 would have provided an important resource to communicate the workings of this embodiment from Outils to the examiner, an embodiment that is not the main focus of the reference. Indeed, Patent Office rules required, for each foreign reference included on an IDS, that a legible copy of the reference be provided. 37 C.F.R. § 1.98(a)(2); *see also* MPEP § 609.04(a)(II) (Rev. 07.2015 Nov. 2015) (requiring, at the time the IDS at issue was filed, a legible copy of each foreign patent). Such a copy was not provided here and the examiner did not have the advantage of a complete set of figures for Outils EP.

Weighing these facts, we find that the same or substantially the same art was not considered by the examiner. We determine that the importance of Figure 10, which the applicant was required to provide the Office and did not, favors our determination.

(2) Becton, Dickinson Factor (b)

Factor (b) under the *Becton, Dickinson* construct looks at "the cumulative nature of the asserted art and the prior art evaluated during examination." *Advanced Bionics*, Paper 6 at 9 n.10. Patent Owner argues that the references asserted by Petitioner (other than Outils) are cumulative to references considered by the examiner. Prelim. Resp. 13–19.

With respect to Matsunaga, Patent Owner argues that it is cumulative to U.S. Patent No. 3,659,170 to Burkett. Prelim. Resp. 15 (referencing Ex. 2014). Patent Owner argues that Burkett discloses that each of two wires originating in an alternating current plug and entering a rectifier

(which would convert the alternating current to direct current) is cumulative to Matsunaga's contact switches, which are outside Matsunaga's power circuit. *Id.* at 15–16.

We do not agree. First, Burkett's switches are in the power circuit. *See* Ex. 2014, Fig. 2. When plug 5 is plugged into an alternating circuit source, wires 11 and 12 are hot wires, which carry the current to the rectifier. *Id.* at 3:21–24. A third wire serves as a ground. *Id.* at 3:18–20. Rectifier 10 converts the alternating current to direct current to run motor 15. *Id.* at 3:31–34. Switches 13, 14 serve to disconnect the motor completely from the electricity source. *Id.* at 3:25–30.

In contrast, as we explained above in our brief description of Matsunaga in Section I.F.2, its contact switches are advantageously outside the main current circuit. *See* Ex. 1006, 9:56–10:2.

With respect to Nakano, Patent Owner argues that Nakano is cumulative to Chinese application CN 102683052 A ("CN '052"). Prelim. Resp. 18–19 (referencing Ex. 1002 at 153–160). We do not agree. CN '052 is directed to an electric, pulling switch. *See* Ex. 1002, 158–160. Although the switch includes a rod that moves in and out of the switch, the rod itself is not a handle nor does the rod itself telescope as argued by Patent Owner. *See id.*; Prelim. Resp. 18–19. Instead, the in-and-out movement of hard conductive rod 1 within conductive sleeve 3 inside slide tube 4 opens and closes the switch. *See* Ex. 1002, 158–160.

In contrast, Nakano discloses a gardening tool with a retractable rod that separates the operator from the tool's cutting blade and includes a switch, triggered by retracting the rod, to cut power to the blade. *See* Ex. 1015, 4–5 (describing the detection unit for detecting if the rod retracts).

The other discussed references are directed to conventional, known lawnmower components. *See* Prelim. Resp. 14–19. Because neither Matsunaga nor Nakano is cumulative of the art previously presented to the Office, and because at least one of these two references is relied upon in each of the asserted grounds, we conclude that the same or substantially the same art was not previously presented to the Office.

(3) Becton, Dickinson Factor (d)

Factor (d) under the *Becton, Dickinson* construct looks at "the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art." *Advanced Bionics*, Paper 6 at 9 n.10. Patent Owner does not contend that there is any overlap in arguments made before the examiner and in the Petition.

c) Part Two of the Advanced Bionics *framework*

We turn to part two of the *Advanced Bionics* framework only if we find that the same or substantially the same art previously was presented to the Office or the same or substantially the same arguments previously were presented to the Office. *Advanced Bionics*, Paper 6 at 10. Although we determine, in our analysis of part one, that the same or substantially the same art or arguments were not previously presented to the Office, we nonetheless apply part two of the framework to fully consider the issue.

(1) Becton, Dickinson Factor (c)

Factor (c) under the *Becton, Dickinson* construct looks at "the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection." *Advanced Bionics*, Paper 6 at 9 n.10. Patent Owner argues that the examiner signed the IDS with Outils EP. Prelim. Resp. 21. Patent Owner also argues that the examiner

"had Outils'[s] figures at his fingertips through a quick Internet search at espacenet." *Id.* Patent Owner argues that Outils EP's figures do not add anything to the disclosure. *Id.* at 22. Patent Owner also argues that the examiner did not reject the IDS. Prelim. Resp. 23.

Outils EP was not the basis of a rejection. It was, however, the lone reference on an IDS, an IDS acknowledged by the examiner. We do not agree, however, that Figure 10 fails to add information to the disclosure of Outils. Indeed, as discussed above, the disclosure in Figure 10, which focuses on a safety feature directed at the position of handlebar 1, is particularly relevant to the subject matter of challenged claims. Also, because the embodiment of Figure 10 is not directed to the main focus of Outils, which is a safety feature on safety cover 3, used in conjunction with cut-grass receiving receptacle 2, it easily could have been overlooked by the examiner who had only the description and no Figure to accompany the description. *See* Ex. 1014, code (57).

(2) Becton, Dickinson Factor (e)

Factor (e) under the *Becton, Dickinson* construct looks at "whether Petitioner has pointed out sufficiently how the [Office] erred in its evaluation of the asserted prior art." *Advanced Bionics*, Paper 6 at 9 n.10.

Patent Owner argues that Petitioner did not argue that the Office erred. Prelim. Resp. 24. First, as we explain above, Petitioner argues (and we agree) that the examiner did not consider Outils because Patent Owner failed to provide Outils's drawings to the examiner. Pet. 28. Under our precedent, Petitioner would not need to argue error, as part two of the analysis would not have been triggered. Second, we find that Petitioner implicitly argues error, in arguing that the examiner did not review the complete reference, including drawings.

Also, we find that the Office erred here by overlooking the complete disclosure of Outils. The examiner, without the benefit of Outils EP's Figure 10, overlooked the reference's disclosure of an actuator triggered when Outils EP's handle is rotated out of the operating position. Outils is focused on protecting a user from the rotating blade when removing the cut-grass receiving receptacle. *See* Ex. 1014, code (57). Outils includes a switch on safety cover 3, which covers the area occupied by the receptacle. *See id.* at 3:25–5:31, Figs. 1–5. The examiner did not have Figure 10 to highlight the functionality of actuator 23 and how that functionality compares to the claimed subject matter.

Complicating the examiner's review of Outils EP is a typographical error, which refers to Figures 9 and 10 in paragraph 29, instead of Figures 8 and 9. *See* Ex. 1002, 281. This typographical error would be evident by looking at Figures 8, 9, and 10. *Compare* Ex. 1014, Figs. 8, 9 (showing actuator 20 and cover 3), *with* Fig. 10 (showing actuator 23). But the examiner did not have the figures. This typographical error could also complicate a reader's understanding of paragraph 34, which is directed to Figure 10. Ex. 1002, 283.

For these reasons, we determine that the Office erred in its consideration of Outils EP by overlooking the relevance of the embodiment of Figure 10.

(3) Becton, Dickinson Factor (f)

Factor (f) under the *Becton, Dickinson* construct looks at "the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments." *Advanced Bionics*, Paper 6 at 9 n.10. Neither Petitioner nor Patent Owner makes any additional arguments regarding this factor.

d) Conclusion

Based on our analysis of the *Becton, Dickinson* factors within the *Advanced Bionics* framework, we determine that discretionary denial under § 325(d) is not appropriate under the facts before us.

C. Compliance with 35 U.S.C. § 312(a)(2)

By statute, "[a] petition . . . may be considered only if . . . the petition identifies all real parties in interest." 35 U.S.C. § 312(a) (2018); *see also* 37 C.F.R. § 42.104 (requiring *inter partes* review petitions to include mandatory notices, including identifying real parties in interest).

> [T]he "two related purposes" of the real party in interest ("RPI") requirement . . . to preclude parties from getting "two bites at the apple" [are]: (1) ensuring that third parties who have sufficiently close relationships with IPR petitioners are bound by the outcome of instituted IPRs in final written decisions under 35 U.S.C. § 315(e), the IPR estoppel provision; and (2) safeguarding patent owners from having to defend their patents against belated administrative attacks by related parties via 35 U.S.C. § 315(b).

RPX Corp. v. Applications in Internet Time, LLC, IPR2015-01750, Paper 128 at 1 (PTAB Oct. 2, 2020) (Boalick, C.J.). A "core function[] of the 'real party-in-interest' . . . requirement[] [is] to assist members of the Board in identifying potential conflicts, and to assure proper application of the statutory estoppel provisions." Patent Trial and Appeal Board Consolidated Trial Practice Guide 12 (Nov. 2019), available at https://www.uspto.gov/TrialPracticeGuideConsolidated. Whether a non-party is a RPI is a "highly fact-dependent question" and must be considered on a case-by-case basis. *Ventex Co. v. Columbia Sportswear N. Am., Inc.*, IPR2017-00651, Paper 148 at 6 (PTAB Jan. 24, 2019) (Paper 148) (precedential) (citing Office Trial Practice Guide, 77 Fed. Reg. 48,756,

48,759 (Aug. 14, 2012)). Petitioners must comply with these requirements in good faith. *See* 37 C.F.R. § 42.11(a) (duty of good faith and candor in proceedings).

Patent Owner contends that we "should deny institution because Petitioner has failed to identify Techtronic Industries Co. Ltd. ("Techtronic") and Homelite Consumer Products, Inc. ("Homelite") as real parties in interest." Prelim. Resp. 49. In response to this contention, Petitioner moved to amend its mandatory notices to add these parties as real parties-in-interest without changing the filing date of the Petition. RPI Motion 1. Patent Owner opposes the motion. RPI Opposition.

On this record, we determine that we need not address Petitioner's motion prior to institution because, even if Techtronic and Homelite were added as RPIs, it would not create a time bar or estoppel under 35 U.S.C. § 315.[11] Under the Board's precedential decision in *Lumentum Holdings, Inc. v. Capella Photonics, Inc.*, our jurisdiction to consider a petition does not require a "correct" identification of all RPIs in a petition. IPR2015-00739, Paper 38 at 6 (PTAB Mar. 4, 2016) (precedential); *see also Blue Coat Sys., Inc. v. Finjan, Inc.*, IPR2016-01444, Paper 11 at 10 (PTAB July 18, 2017) ("Evidence [of failure to identify all RPIs] is, at best, suggestive of an issue that is not jurisdictional."). The Federal Circuit agrees that § 312(a)(2) is not jurisdictional. *See Mayne Pharma Int'l Pty. Ltd. v. Merck Sharp & Dohme Corp.*, 927 F.3d 1232, 1240 (Fed. Cir. 2019) ("[I]f a petition fails to identify all real parties in interest under § 312(a)(2), the Director can, and does, allow the petitioner to add a real party in

[11] The panel confirms that it does not have a conflict with Techtronic and Homelite.

interest." (quoting *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc)).

Both parties provide arguments and evidence in support of those arguments with respect to the RPI Motion and both parties provide declarant testimony. *See, e.g.*, Ex. 1036; Ex. 2019. Our rules require uncompelled direct testimony to be submitted in the form of an affidavit or declaration. 37 C.F.R. § 42.53. Our rules also authorize the cross-examination of those offering the direct testimony. 37 C.F.R. § 42.51(b)(1)(ii). Neither party has had the opportunity to cross-examine the other party's declarant for this issue. Also, Patent Owner indicates that certain documentary evidence, not available to file with its RPI Opposition, may support its position. *See* RPI Opposition 6; Ex. 2019 ¶¶ 5–12.

We determine that it is appropriate, on the current record, to reserve judgment on the RPI Motion until we have a complete record. *SharkNinja Operating LLC v. iRobot Corp.*, IPR2020-00734, Paper 11 at 18 (PTAB Oct. 6, 2020) (determining that the Board need not address whether a party is an unnamed RPI because, even if it were, it would not create a time bar or estoppel under 35 U.S.C. § 315). The parties are free to further develop the record with respect to the RPI issue at trial. To be clear, we make no determination at this time as to whether Techtronic and Homelite are real parties-in-interest[12] or if Petitioner has demonstrated sufficient good cause for us to allow Petitioner to update its mandatory notices without changing the filing date of the Petition.

[12] If we determine, on the complete record, that Techtronic and Homelite are not real parties-in-interest, then the RPI Motion would be moot.

D. Constitutional Challenge

Patent Owner argues that "[t]his proceeding should be dismissed because the assigned Administrative Patent Judges are principal officers of the United States and yet were not appointed by the President and confirmed by the Senate as required by the Appointments Clause of the United States Constitution." Prelim. Resp. 56. Patent Owner argues, without further explanation, that the remedy afforded by the Federal Circuit in *Arthrex, Inc. v. Smith and Nephew, Inc.*, 941 F.3d 1320 (Fed. Cir. 2019), *cert. granted sub nom. United States v. Arthrex, Inc.*, 2020 WL 6037206 (Oct. 13, 2020), was ineffective and inapplicable to the current panel. *Id.*

This issue has been addressed by the Federal Circuit's decision in *Arthrex*, 941 F.3d at 1337 ("This as-applied severance . . . cures the constitutional violation."); *see also Arthrex, Inc. v. Smith & Nephew, Inc.*, 953 F.3d 760, 764 (Fed. Cir. 2020) (Moore, J., concurring in denial of rehearing) ("Because the APJs were constitutionally appointed as of the implementation of the severance, *inter partes* review decisions going forward were no longer rendered by unconstitutional panels."). Accordingly, we do not consider this issue any further for this Decision.

III. UNPATENTABILITY

A. Applicable Law

Petitioner's asserted grounds of unpatentability are based on obviousness under 35 U.S.C. § 103.

> Section 103(a) forbids issuance of a patent when "the differences between the subject matter sought to be patented 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 ordinary skill in the art; and (4) when available, objective evidence, such as commercial success, long felt but unsolved needs, and failure of others.[13] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

"[O]bviousness must be determined in light of *all the facts*, and . . . a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine" teachings from multiple references. *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (emphasis added); *see also PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) ("The presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact.").

B. Level of Ordinary Skill in the Art

The level of 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). Petitioner contends that a person having ordinary skill in the art of the '686 patent "would have had at least a bachelor's degree in mechanical engineering, electrical engineering, or similar technical field, with at least three years of relevant product design experience [and] [a]n increase in experience could compensate for less education." Pet. 12 (referencing Ex. 1003 ¶ 44).

[13] The Patent Owner does not direct us to any objective evidence of non-obviousness in the current record.

Patent Owner states that "[f]or purposes of this preliminary response only, Patent Owner adopts Petitioner's proposed level of ordinary skill in the art." Prelim. Resp. 6.

For the purposes of this Decision, we apply Petitioner's definition of the level of ordinary skill in the art. We determine that this definition is consistent with the prior art of record and the skill reflected in the Specification of the '686 patent, based on our review of the limited record.

C. Claim Construction

In *inter partes* reviews, we interpret a claim "using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b)." 37 C.F.R. § 42.100(b) (2019). Under this standard, we construe 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." *Id.*

Petitioner contends that "the terms of the ['686 patent] should be given their plain and ordinary meaning as understood by a person of ordinary skill in the art at the time of the alleged invention . . . because the elements of the prior art read squarely on the Challenged Claims' limitations." Pet. 12. Petitioner offers express constructions for three claim terms—"power supply circuit" and the related terms "locks" and "unlocks." *Id.* at 13–18.

"Patent Owner believes that no construction is required for these terms at this time because the construction of these terms is not relevant to the issues raised herein." Prelim. Resp. 7.

We determine that we need to expressly construe only the terms "locks" and "unlocks" to resolve the parties' disputes on the current record. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d

1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and 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))).

1. "locks"

Petitioner contends that the term "locks" should be construed to mean "electrically disabling." Pet. 17 (referencing Ex. 1003 ¶ 48). To support its proposed construction, Petitioner argues that the '686 patent does not disclose a mechanical lock. *Id.* Mr. Reed's testimony mirrors the text in the Petition, providing no additional support for Petitioner's proposed construction. *See* Ex. 1003 ¶ 48.

We determine, on the current record, that the proper construction of the term "locks" at least encompasses Petitioner's construction of "electrically disabling."

In construing the term, we start with the language of the claims. *See, e.g.*, *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) ("[T]he context in which a term is used in the [claim at issue] can be highly instructive."). Claim 1 recites, in relevant part, "when the handle rotates to the accommodating position relative to the main body, the second control device locks the first control device so that the first control device is not allowed to start the motor." Ex. 1001, 8:45–49. The claim requires the "second control device" to perform the "locks" function. The claim also requires "the second control device [to] comprise[] at least one of a switch connected to the power supply circuit and a signal source device for sending a control signal to control the motor." *Id.* at 8:49–52. This language supports the concept that the second control device may operate

electronically, but does not limit the operation. For example, the control signal could send a signal that results in mechanically disabling the motor.

The language of other claims can also inform a construction. *See Phillips*, 415 F.3d at 1314 ("Other claims of the patent in question . . . can also be valuable sources of enlightenment as to the meaning of a claim term."). We do not discern anything in the other claims that further informs our construction. *See* Ex. 1001, 9:12–23, 10:5–19, 10:45–56 (claims 8, 11, and 18) (using "locks" in the same way as claim 1).

"[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Phillips*, 415 F.3d at 1315. The Specification states that "[i]f one control device responsible for monitoring risk items is in a state corresponding to presence of danger, it locks the control device in the control system initiatively controlled by the user so that the user cannot start the motor." Ex. 1001, 5:51–55. The Specification also states that

> Preferably, the contact switch SW, the contact switch SW1 and the contact switch SW2 all are connected in series on the same line of the power supply circuit. When one of the contact switch SW1 and the contact switch SW2 switches off, no matter whether the contact switch SW is triggered by the trigger B to be in an off or on state, the power supply circuit cannot communicate with the line to allow the electric power source to provide electrical energy to the motor, thereby achieving safety protection.

Id. at 7:52–60. This disclosure supports a construction that at least encompasses electrically disabling. We are careful, however, not to *limit* a claim term to a preferred embodiment, by reading that embodiment into the

claim. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) ("[L]imitations are not to be read into the claims from the specification.").

According, we construe, preliminarily, the term "locks" to encompass electrically disabling the first control device.[14]

2. "unlocks"

Petitioner contends that the term "unlocks" should be construed to mean "electrically enabling." Pet. 17 (referencing Ex. 1003 ¶ 48). The claim uses the term "unlocks" to mean placing the first control device in a state that is the opposite of the state where it is "locked." *See, e.g.*, Ex. 1001, 8:41–48 (reciting that the "unlock" state allows the first control device to start the motor and the "locked" state does not allow the first control device to start the motor). The Specification treats "locks" and "unlocks" in this same way. *See, e.g.*, *id.* at 6:41–48 ("When the handle rotates to a designated position . . . , the second control device unlocks the first control device so that the first control device can start the motor, and when the handle rotates to a position other than the designated position . . . , the second control device locks the first control device so that the first control device cannot start the motor.").

For the reasons discussed above in connection with the construction of "locks," we construe, preliminarily, the term "unlocks" to encompass electrically enabling the first control device.

[14] Our claim constructions are preliminary at this stage of the proceeding, and the parties may further develop the record at trial to support their claim interpretations.

D. Ground 1: Claims 1–7 and 11–17 as Obvious Over Outils, Roelle, and Matsunaga

Petitioner contends that the combination of Outils, Roelle, and Matsunaga renders obvious independent claims 1 and 11, and claims 2–7 and 12–17, which depend from claim 1 or claim 11. In the subsections below, we discuss the scope and content of the prior art and any differences between the claimed subject matter and the prior art, on a limitation-by-limitation basis.

1. Independent claim 1

a) Preamble

The preamble of claim 1 recites "[a] gardening tool." Ex. 1001, 8:19. Petitioner contends that Outils discloses a gardening tool and, specifically, an electric walk-behind lawnmower. Pet. 28 (referencing Ex. 1014, 3:28–30; Ex. 1003 ¶ 67). Petitioner also contends that Roelle discloses a gardening tool and, specifically, a lawnmower. Pet. 29 (referencing Ex. 1011, Figs. 1A, 2).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that both Outils and Roelle disclose the subject matter of the preamble of claim 1. In view of this determination, we need not determine, at this stage of the proceeding, whether the preamble is limiting. Patent Owner does not dispute Petitioner's contention with respect to the preamble at this time.

b) Main body limitation

Claim 1 recites "a main body having at least a functional accessory and a motor for driving the functional accessory." Ex. 1001, 8:20–21. Petitioner contends that Outils's casing 6 corresponds to the recited main

body, Outils's cutting device, "which is a rotating cutting/mowing blade," corresponds to the recited functional accessory, and Outils's electric motor corresponds to the recited motor. Pet. 30 (referencing Ex. 1014, 3:27, 3:29, 3:33, 4:3, 5:27; Ex. 1003 ¶ 69).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Outils discloses the subject matter of this limitation. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this time.

c) Handle limitation

Claim 1 recites "a handle, rotatably connected to the main body, having at least having one operation assembly for being operated by a user to control the motor when the handle is located in a secure position." Ex. 1001, 8:22–25. Petitioner contends that Outils's handle 1 is rotatably connected to casing 6, the alleged main body. Pet. 30 (referencing Ex. 1014, Figs. 1, 4–7, 10, 11; Ex. 1003 ¶ 70).

Petitioner contends that a user operates Outils's hold-to-run component 30, which resides on handle 1, to control the motor. Pet. 31 (referencing Ex. 1014, 4:8). Petitioner explains that "operations assembly 30 uses 'a remote control cable 29 [Figure 1], which acts on a motor brake, a brake coupling or an electrical supply contactor.'" *Id.* (referencing Ex. 1014, 4:6–7) (alteration in original). Petitioner further explains that during use, Outils's handle 1 is in a predetermined secure (in-use) position, as it is locked in place. *Id.* at 32 (referencing Ex. 1014, 6:20–7:13, Figs. 6, 7; Ex. 1003 ¶ 73).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this

stage of the proceeding, that Outils discloses the subject matter of this limitation. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this time.

d) Locking mechanism limitation

Claim 1 recites "a locking mechanism for locking the rotating position of the handle." Ex. 1001, 8:26–27. Petitioner contends that "Outils expects rotatable handle 1 to be secure at its use position using the locking structure of Figures 6 and 7 [because] pivoting lock 12 with extension piece 16[] locks the rotating handle in place." Pet. 33–34. But, Petitioner contends that a person having ordinary skill in the art "would have recognized that Outils'[s] lock 12 could inadvertently *and dangerously* allow handle 1 to rotate from its accommodating position of Figure 7, *i.e.*, a position when the mower is not in use and/or the user is emptying the cut-grass receptacle, to its in-use position of Figure 6 (or at least closer to that position)." Pet. 34 (referencing Ex. 1003 ¶ 75). Petitioner contends that a person having ordinary skill in the art "would thus have been motivated by safety to lock handle 1 in its non-use, accommodating position of Figure 7." *Id.*

Petitioner contends that "Roelle teaches a walk-behind mower similar to Outils[] with a rotating handle 24 that permits a user to empty a rear-located cut-grass receptacle" and that Roelle teaches securing rotating handle 24 both in its in-use position, as shown in Figures 1, 1A, and in its accommodating, vertical position when the mower is not in use, as shown in Figure 2. Pet. 34 (referencing Ex. 1011, 3:67–4:5). Specifically, Petitioner explains that Roelle includes a spring-biased latching pin 68, which corresponds to the claimed "locking mechanism," which fits in recesses 70, 72 of plate 26, to keep the handle locked in both the in-use position and in the accommodating position. *Id.* at 34–35 (referencing Ex. 1003 ¶ 78).

Petitioner contends that a person having ordinary skill in the art "would have found it obvious to provide Outils with the locking mechanism of Roelle to keep the handle in its accommodating position when not in use." *Id.* at 35 (referencing Ex. 1003 ¶ 78).

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Roelle discloses the subject matter of this limitation, and that a person having ordinary skill in the art would have found it obvious to modify the locking mechanism of Outils, as taught by Roelle, to lock the handle in both the in-use and the accommodating positions. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this time.

e) Locking member limitation

Claim 1 recites "a locking member configured to engage with the locking mechanism and providing at least a locking structure to cause the locking mechanism to keep the handle at an accommodating position relative to the main body when the gardening tool is not being used." Ex. 1001, 8:28–32. Petitioner contends that Roelle's pin 68 corresponds to the claimed "locking mechanism" and Roelle's vertical plate 26 corresponds to the claimed "locking member." Pet. 36 (referencing Ex. 1003 ¶ 79). Petitioner contends that, as explained above for the "locking mechanism," a person having ordinary skill in the art "would have found it obvious to provide Roelle's locking structure in Outils'[s] mower so that handle 1 can be locked at the non-use, accommodating position of Figure 2." *Id.*

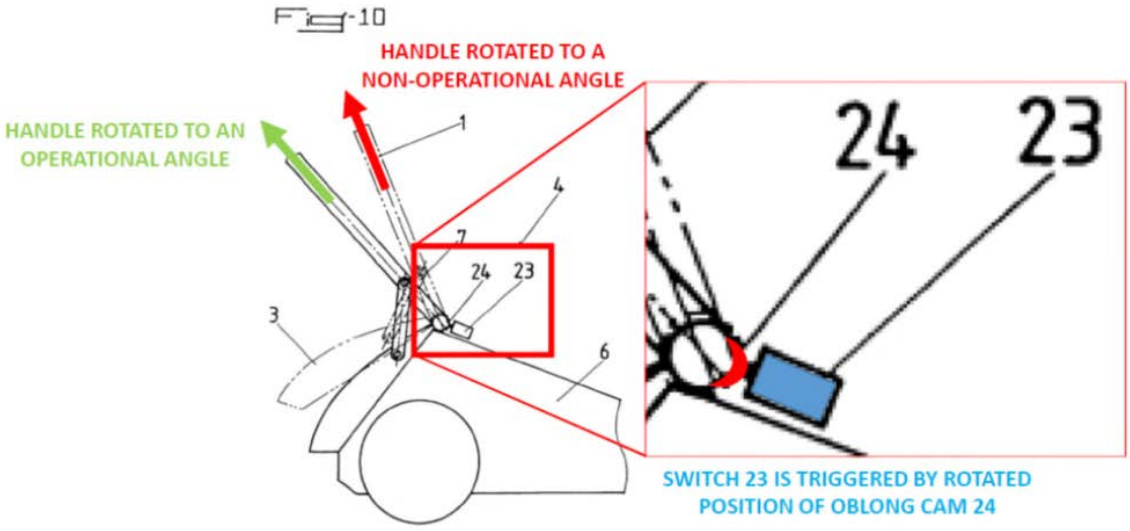
Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Roelle discloses the subject matter of this

limitation, and that a person having ordinary skill in the art would have found it obvious to modify the locking mechanism of Outils, as taught by Roelle, to include a locking member configured to engage with the locking mechanism and providing a locking structure to cause the locking mechanism to keep the handle at an accommodating position relative to the main body when the gardening tool is not in use. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this time.

f) Control system limitation

Claim 1 recites "a control system capable of preventing the motor from being controlled by the operation assembly and halting the motor when the handle is located out of the secure position." Ex. 1001, 8:33–35. Petitioner contends that Outils's Figure 10 depicts the recited control system, which includes actuator 23 and cam 24. Pet. 38 (referencing Ex. 1014, 8:23–29).

Petitioner explains that Outils discloses that its actuator 23 is similar to actuator 20, which may be an electrical supply cut-off switch for an electric motor and is, preferably, an all-or-nothing switch, which "allow[s] the controlled element to be restarted only after they have been interlocked again as a result of their control component returning to the in-use position." Pet. 38–39 (referencing Ex. 1014, 7:25–26, 9:10–13). Petitioner contends that a person having ordinary skill in the art "would have interpreted [Outils] as indicating that the 'stoppage of the motor' and 'braking [halting] of the cutting blade' . . . continue until the handle 1 returns to its in-use position with cam 24 properly tripping activation actuator 23." *Id.* at 39 (referencing Ex. 1014, 8:28; Ex. 1003 ¶ 83) (last alteration in original). To illustrate this disclosure, Petitioner provides an annotated version of Outils's Figure 10, including an enlarged section, which we reproduce below.



Id. The annotated version of Figure 10 illustrates handle 1 in operational and non-operational (accommodating) positions, and how cam 24 interacts with actuator 23 based on the handle position.

Upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Outils discloses the subject matter of this limitation. Patent Owner does not dispute Petitioner's contentions with respect to this limitation at this time however, as we discuss below, Patent Owner disputes related contentions associated with limitations directed to elements of the recited control system.

g) First control device limitation

Claim 1 recites "the control system comprising: a first control device configured to be controlled by the operation assembly." Ex. 1001, 8:36–38. Petitioner contends that Outils discloses that its operation assembly, including hold-to-run component 30, controls an electrical supply contactor

and that this contactor is the recited first control device. Pet. 40 (referencing Ex. 1014, 4:5–12; Ex. 1003 ¶ 85).

Patent Owner argues that Outils's hold-to-run component 30 does not control the electrical contactor. Prelim. Resp. 33–34. Patent Owner argues that, instead, Outils discloses that component 30 actuates remote control cable 29. *Id.* at 33.

We have considered Patent Owner's argument, but do not find it sufficient at this stage of the proceeding to demonstrate a deficiency in Petitioner's position. Based on the current record, we understand Outils to disclose that hold-to-run component 30 acts on cable 29, which acts on the electrical supply contactor. *See* Ex. 1014, 4:5–8 ("The means 28 for controlling the activation or rotation of the cutting blade is advantageously provided in the form of a remote control cable 29, which acts on . . . an electrical supply contactor and is actuated by means of a hold-to-run control component 30, such as a handle, a lever, a bow or the like, provided on the handlebar 1."). That is, component 30 controls the contactor through cable 29.

Accordingly, upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Outils discloses a first control device.

h) Second control device limitation

Claim 1 recites

> the control system comprising: . . . a second control device configured to be controlled according to the rotating position of the handle wherein, when the handle rotates to a designated position relative to the main body, the second control device unlocks the first control device so that the first control device

> allows starting of the motor, and, when the handle rotates to the accommodating position relative to the main body, the second control device locks the first control device so that the first control device is not allowed to start the motor.

Ex. 1001, 8:36–48. Petitioner contends that Outils's actuator 23 is the recited second control device. Pet 40. Petitioner contends that Outils's Figure 10 depicts actuator 23 disposed proximate to handle 1, with cam 24 located on handle 1. *Id.* (referencing Ex. 1014, 8:24). Petitioner contends that when handle 1 is in a predetermined, "in-use," position, that actuator 23 unlocks the electrical supply contactor (the alleged first control device) so that the first control device allows starting of the motor. *Id.* at 40–41. When handle 1 and cam 24 rotate to the accommodating (non-use) position relative to casing 6 (main body), actuator 23 locks the electrical supply contactor, so that motor cannot start. *Id.* at 41 (referencing Ex. 1003 ¶ 86); *see also* Pet. 38–39 (describing the control system and how actuator 23, like actuator 20, may be an all-or-nothing cut-off switch for the motor, that allows the motor to be restarted only after the actuator has been interlocked again).

Patent Owner argues that Petitioner relies, improperly, on conclusory statements, supported only by verbatim language in Mr. Reed's Declaration. Prelim. Resp. 35. Patent Owner adds that "[i]ndeed, Outils is silent as to what interaction (if any) Outils'[s] activation actuator 23 has with Outils'[s] electrical supply contactor." *Id.* (referencing Ex. 1014, 4:5–12, 8:22–29, claim 3).

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. Read in conjunction with Petitioner's contentions with respect to the control system limitation, the information in the Petition explains how actuator 23, which is similar to actuator 20, may be an all-or-

nothing cut-off switch for the motor, that allows the motor to be restarted only after the actuator has been interlocked again. *See* Pet. 38–39; Ex. 1014, 9:10–13 ("The activation actuators 23 and 25 are advantageously similar to the activation actuator 20 and are preferably of the all-or-nothing type, that is to say that they allow the controlled element to be restarted only after they have been interlocked again as a result of their control component returning to the in-use position."), 7:25–26 ("The activation actuator 20 can be an electrical supply cut-off switch for an electric motor or for the ignition circuit of a thermal engine.").

Accordingly, upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Outils discloses the recited second control device.

i) Switch limitation

Finally, claim 1 recites "wherein the second control device comprises at least one of a switch connected to the power supply circuit or a signal source device for sending a control signal to control the motor." Ex. 1001, 8:49–52. Petitioner contends that "Outils'[s] second control device (activation actuator 23) is described as 'advantageously similar to the activation actuator 20' . . . which, in turn, 'can be an electrical supply cut-off switch for an electric motor.'" Pet. 41 (referencing Ex. 1014, 9:10, 7:25). Petitioner adds that a person having ordinary skill in the art "would have understood this description to mean activation actuator 23 can be a switch connected in the power supply circuit." *Id.* (referencing Ex. 1003 ¶ 88).

Petitioner then states that "*[h]owever*, [a person having ordinary skill in the art] would have understood from the disclosure of Matsunaga that it is not desirable to pass the high current needed to power a lawn mowing motor

through contact switches." Pet. 41–42 (referencing Ex. 1006, 1:7–16) (emphasis added). Petitioner explains that "it is preferable to use smaller capacity contact switches . . . and to avoid the thick wiring . . . and associated danger of high current flowing through contact switches." *Id.* (referencing Ex. 1006, 1:15–16, 7:23–30). Petitioner concludes that "[t]hese factors would have motivated [a person having ordinary skill in the art] to make an obvious modification to Outils'[s] system by controlling its electrical supply cut-off switch using a separate, low-current circuit with thin wiring lines through which '[o]nly a small current flows for transmitting the ON/OFF state' of contact switches." *Id.* (referencing Ex. 1006, 7:23–30; Ex. 1003 ¶ 88) (last alteration in original). That is, Petitioner contends that a person having ordinary skill in the art would have been motivated to make the proposed modification so as to employ a low current contact switch at the position of actuator 23 that was connected to the power supply circuit with thin wiring.

Petitioner contends that Matsunaga discloses a lawn mowing device with a circuit having a contact switch that sends a control signal to Matsunaga's power supply circuit. Pet. 42 (referencing Ex. 1006, Fig. 2). Petitioner explains that Matsunaga's power supply circuit of the embodiment of Figure 2 includes battery 7, semiconductor switches Q1 and Q2, and motor M. *Id.* Petitioner contends that a person having ordinary skill in the art would have found it obvious to implement Outils's actuator 23 as either Matsunaga's switch 11 or switch 12. *Id.* at 43–44 (referencing Ex. 1003 ¶¶ 90, 91). Petitioner contends that, in either case, the switch satisfies the

recitation of a switch connected to the power supply circuit or a source for sending a control signal to the power supply circuit. *Id.*[15]

In summary, we understand Petitioner's position to be that, although Outils's actuator 23 would satisfy the subject matter of the switch limitation of claim 1, because it is a switch connected to the power supply circuit for sending a control signal to control the motor, a person having ordinary skill in the art would have modified Outils's control system to includes the circuit disclosed in Matsunaga's Figure 2. For this modification, actuator 23 would be embodied as either contact switch 11 or contact switch 12, with cam 24 acting on either switch, and with the contact switch connected to another high-current switch, such as semiconductor switch Q1 or Q2, in the power supply circuit.

Patent Owner argues that Petitioner failed to meet its burden in proving that Matsunaga is analogous art. Prelim. Resp. 27–29. Specifically, Patent Owner argues that "Petitioner has failed to show that Matsunaga is either from the same field of endeavor as the ['686] patent or is reasonably pertinent to the particular problem the inventor of the ['686] patent was trying to solve." *Id.* at 28.

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. To the extent that Patent Owner is arguing that every petitioner has the affirmative burden of production to make arguments and

[15] The claim calls for the switch or signal source to send a control signal "to control the motor." Ex. 1001, 8:49–52. We understand Petitioner's proposed modification, which results in Outils's cam 24 acting on either contact switch 11 or 12 and with the contact switch connected to another high-current switch in the power supply circuit, to be used for sending a control signal to control the motor.

provide evidence (other than asserting a referencing in an obviousness combination) to show that a reference is analogous art, we do not agree. *Cf. Parrot S.A. v. Drone Techs., Inc.*, IPR2014-00732, Paper 29 at 11 (PTAB Oct. 20, 2015) ("When the analogous-art issue was raised by Patent Owner in its Patent Owner Response, it was incumbent upon Petitioner to demonstrate that Shkolnikov is analogous art.") (non-precedential). Patent Owner does not direct us to any authority supporting such an affirmative burden of production in a petition.

Further, we determine that the limited record before us sufficiently supports that Matsunaga is analogous art. "To be considered within the prior art for purposes of the obviousness analysis, a reference must be analogous," which is a question of fact. *Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331, 1335 (Fed. Cir. 2015). Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *Id*. In order for a reference to be "reasonably pertinent" to the problem, it must "logically [] have commended itself to an inventor's attention in considering his problem." *In re Icon Health & Fitness, Inc.*, 496 F.3d 1374, 1379–80 (Fed. Cir. 2007); *see also KSR Int'l Co.*, 550 U.S. at 417 ("When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one."). The scope of analogous art is to be construed broadly. *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010).

We determine that the current record sufficiently supports that Matsunaga is in the same field of endeavor as the '686 patent. We

determine, on the present record, that the '686 patent is directed to the field of gardening tools. *See* Ex. 1001, 1:14–15 ("The present disclosure relates generally to gardening tools, and more particularly to mowers."). Matsunaga is directed to a gardening tool and, specifically, a grass mower. Ex. 1006, 6:34–35; *see also* Pet. 42 (asserting "Matsunaga teaches a battery-powered electric lawn mowing device").

We also determine that the current record sufficiently supports that Matsunaga is reasonably pertinent to the particular problem with which the inventors were involved. We determine that the inventors of the '686 patent were involved with protecting the operator of a gardening tool from the hazards associated with a functional accessory, such as a rotating blade of the tool. *See* Ex. 1001, 1:19–35. Similarly, Matsunaga is concerned with a user of its garden tool being inadvertently exposed to the risk of its rotating blade because of a fault in the electrical control circuit. *See* Ex. 1006, 1:17–43, 9:19–55 (explaining the protections that turn the motor off even in the event of a short circuit of the semi-conductor switches).

Next, Patent Owner argues that Petitioner fails to prove that actuator 23 is a switch or that Outils has a power supply circuit. Prelim. Resp. 36–37. We have considered Patent Owner's arguments, but do not find them sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. First, Petitioner points to adequate evidence in Outils to support a reasonable likelihood that actuator 23 is a switch, as Outils expressly discloses that actuator 23 is preferably similar to actuator 20 and that actuator 20 is preferably a cut-off switch. *See* Pet. 41.

Second, Petitioner points to adequate evidence in Outils to support a reasonable likelihood that Outils discloses an electric motor with actuator as an electrical supply cut-off switch for that motor. Pet. 41 (referencing

Ex. 1014, 9:10, 7:25). Petitioner contends that, from this disclosure, a person having ordinary skill in the art would understand that actuator 23 would be a switch connected to the power circuit. *Id.* We find this contention sufficient at this stage of the proceeding to show that Outils discloses a switch and a power supply circuit. To the extent that Patent Owner argues that Petitioner is *required* to have testimony support such a contention, we do not agree. With respect to this specific contention, the panel is capable of understanding, from the disclosure of Outils, what a person having ordinary skill in art would understand without the aid of testimony, at least in determining if Petitioner has made a sufficient showing for institution. Further, Petitioner's declarant supports Petitioner's proffered reading of Outils. Ex. 1003 ¶ 88 (stating that a person having ordinary skill in the art "would have understood this description [in Outils] to mean activation actuator 23 can be a switch connected in the power supply circuit (e.g., in series between the electric power source and the electric motor).").

Next, Patent Owner argues that Petitioner fails to show that Matsunaga discloses the subject matter of the switch limitation. Prelim. Resp. 37–38. Patent Owner argues that Matsunaga's contact switches are user-controlled, but claim 1 requires the recited switch to be controlled based on rotation of the tool's handle. *Id.* at 38.

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. Patent Owner's argument ignores the combined teachings of Outils and Matsunaga and, instead, focuses on Matsunaga's uses of the switches alone. Petitioner expressly contends that switch 11 or 12 would replace actuator 23, with cam 24, which resides on the handle, acting on the switch. *See, e.g.*, Pet. 43 ("[A person having ordinary skill in

the art] would have found it obvious, based on the motivations explained above, to implement Outils'[s] actuation activator 23 (a contact switch triggered by cam 24) as Matsunaga's contact switch 11.").

Next, Patent Owner argues that Petitioner fails to show that a person having ordinary skill in the art would have been motivated to modify Outils with Matsunaga's contact switches. Prelim. Resp. 39. First, Patent Owner argues that Petitioner's stated motivation is based on an incorrect premise that actuator 23 is a switch. *Id.* Second, Patent Owner argues that Petitioner does not argue that a person having ordinary skill in the art would have also included Matsunaga's semiconductor switches. *Id.* at 40. Patent Owner argues that Matsunaga teaches that the only purpose of contact switches 11, 12 is to improve the reliability of the semiconductor switches. *Id.*

We have considered Patent Owner's arguments, but do not find them sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. First, as we discussed above, we find that Petitioner sufficiently contends, with supporting evidence, that actuator 23 is a switch.

Second, we determine that Petitioner's stated motivation for combining the teachings of Matsunaga and Outils at least implicitly requires the incorporation of Matsunaga's semiconductor switches. The basis for Petitioner's asserted motivation for its proposed substitution is the undesirability of having contact switches as part of the high current power supply circuit. This basis at least implies that Petitioner's proposed modification includes the semiconductor switch associated with contact switch 11 or contact switch 12, as those switches are in the high current power supply circuit.

Next, Patent Owner argues that Petitioner fails to demonstrate that a person having ordinary skill in the art would have been motivated to

combine the teachings of Outils, Roelle, Matsunaga, and 16 CFR § 1205.05. Prelim. Resp. 41. Patent Owner argues that "Petitioner at best argues that a [person having ordinary skill in the art] would have combined Outils ***individually*** with Roelle, Matsunaga, or CFR 1205.05." *Id.*

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. First, we disagree with Patent Owner's reading of the Petition to include 16 CFR § 1205.05 as a reference in the asserted grounds. Rather, Petitioner relies on these regulations as evidence of the general knowledge of a person having ordinary skill in the art and evidence of the state of the art at the time of the invention. Pet. 26–27. Petitioner uses this general knowledge to underlie one alternative assertion of a reason to modify Outils in the manner claimed. Pet. 39.

As to the additional references relied on in the first ground, Petitioner relies on Roelle and Matsunaga for teaching discrete elements. *See* Pet. 27–46. Patent Owner does not direct us to any teachings in any of the references that would suggest an incompatibility in the collective teachings.

Patent Owner's reliance on the Board's decision in *VIZIO, Inc. v. Nichia Corp.*, IPR2017-01608, Paper 72 (PTAB Jan. 9, 2019), is misplaced. Prelim. Resp. 41. In that case, the panel determined that the petition failed to provide any specific analyses for the combination of multiple references. *See VIZIO, Inc.*, Paper 72 at 39. Here, Petitioner provides detailed analyses as to the combined teachings of Outils, Roelle, and Matsunaga.

Finally, Patent Owner argues that Petitioner fails to show that a person having ordinary skill in the art "would have had a reasonable expectation of success in combining Outils with Roelle, Matsunaga, ***and*** CFR 1205.05." Prelim. Resp. 39. Specifically, Patent Owner argues that neither Petitioner

nor Mr. Reed asserts that there would have been a reasonable expectation of success in combining Outils with Roelle or CFR 1205.05 as proposed. *Id.*[16]

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. "The presence or absence of a reasonable expectation of success is . . . a question of fact." *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1366 (Fed. Cir. 2016). "The reasonable expectation of success requirement refers to the likelihood of success in combining references to meet the limitations of the claimed invention." *Id.* at 1367. We determine, based on the current record, that the references themselves demonstrate a sufficient reasonable expectation of success. Claim 1 requires a gardening tool with a main body, rotatable handle connected to that main body, a locking mechanism, and locking member, and a control system. *See* Ex. 1001, 8:19–52. We understand Petitioner to propose improving the locking mechanism in Outils with the locking mechanism and locking member of Roelle to arrive at a locking structure that locks Outils's rotatable handle in place in both the in-use position and in the accommodating position, as taught in Roelle. *See* Ex. 1011, 3:67–4:5.

Accordingly, upon review of the information in the Petition and corresponding evidence, we determine Petitioner has made a sufficient showing, at this stage of the proceeding, that Outils, as modified by Roelle, discloses the subject matter of the locking mechanism and the locking member, and as further modified by Matsunaga, discloses the subject matter of the recited switch. We also determine that Petitioner has sufficiently

[16] Patent Owner acknowledges that Petitioner and Mr. Reed assert a reasonable expectation of success in the modification of Outils with Matsunaga. Prelim. Resp. 42 n.18.

provided reasons, with rational underpinnings, to support why a person having ordinary skill in the art would have modified Outils with Roelle's teaching and Matsunaga's teaching. *See KSR Int'l Co.*, 550 U.S. at 418 (stating that, to facilitate the analysis of an obviousness position, the proponent should provide "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

j) Conclusion

For the reasons discussed above in connection with our analysis of the limitations of claim 1, we determine, on the current record, that the information in the Petition demonstrates a reasonable likelihood Petitioner would prevail in its contention that claim 1 is unpatentable under 35 U.S.C. § 103 over Outils, Roelle, and Matsunaga.

2. Independent claim 11

Petitioner combines its analysis for independent claims 1 and 11. *See* Pet. 27–44. Patent Owner does not argue any limitation of claim 11 separately. Upon review of the information in the Petition and corresponding evidence, we determine that Petitioner provides sufficient arguments and evidence to address the subject matter of claim 11. For the reasons above in connection with our analysis of claim 1, we determine, on the current record, that the information in the Petition demonstrates a reasonable likelihood Petitioner would prevail in its contention that claim 11 is unpatentable under 35 U.S.C. § 103 over Outils, Roelle, and Matsunaga.

3. Dependent claims 2–7 and 12–17

Dependent claims 2–7 depend directly from claim 1, and claims 12–17 depend directly from claim 11. We have reviewed Petitioner's contentions with respect to these dependent claims and determine, on the current record, that the information in the Petition demonstrates a reasonable

likelihood Petitioner would prevail in its contention that claims 2–7 and 12–17 are unpatentable under 35 U.S.C. § 103 over Outils, Roelle, and Matsunaga. Pet. 44–51. Patent Owner does not provide any arguments directed specifically to any of these dependent claims.

E. Ground 2: Claims 8–10 and 18–20 as Obvious Over Outils, Roelle, Matsunaga, Langdon, and Nakano

Claims 8–10 depend from claim 1, and claims 18–20 depend from claim 11. We have reviewed Petitioner's contentions with respect to these dependent claims and determine, on the current record, that the information in the Petition demonstrates a reasonable likelihood Petitioner would prevail in its contention that claims 8–10 and 18–20 are unpatentable under 35 U.S.C. § 103 over Outils, Roelle, Matsunaga, Langdon, and Nakano. Pet. 51–67.

Patent Owner argues that Petitioner has not met its burden in proving that Nakano is analogous art. Prelim. Resp. 44–47. We have considered Patent Owner's arguments, but do not find them sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. As we discussed above in connection with our analysis of claim 1, to the extent Patent Owner argues that Petitioner had an affirmative burden of production beyond asserting a reference, we do not agree.

Patent Owner argues that Nakano is not from the same field as the '686 patent, which is from the field of "electric walk-behind lawn mowers and associated safety features." Prelim. Resp. 44. Patent Owner also argues that Nakano is not reasonably pertinent to the problem addressed in the '686 patent, "providing a control system for disabling a lawnmower when the lawnmower's handle is moved from a designated use position." *Id.* at 45–

46. We do not agree, based on our review of the current record, with either of Patent Owner's arguments.

We determine that the current record sufficiently supports that Nakano is in the same field of the '686 patent. Patent Owner too narrowly defines the field of the '686 patent. The patent itself defines the field as "gardening tools" with a motor and functional accessory, such as a blade. Ex. 1001, 1:14–21. Nakano is directed to an electric bush cutter, that is, a gardening tool with a motor and rotating cutting blade. Ex. 1015, 7–11 (describing electric bush cutter 1 with battery pack 2, driving unit 151 with a motor, and cutting blade 155).

We also determine that the current record sufficiently supports that Nakano is reasonably pertinent to a problem addressed by the '686 patent. Again, Patent Owner too narrowly defines the problem of the '686 patent as directed to a rotating handle. The '686 patent also addresses the safety concerns with the inadvertent retraction of telescoping tubes, bringing an operator too close to a rotating blade. *See* Ex. 1001, 7:19–60; *see also* Pet. 44 ("Nakano shares [the] goal of collapsing the handle 'to realize a compact electric bush cutter capable of reducing a storage space thereof' but provides added safety where, 'if retraction of a rod . . . is detected while work is performed in an extended state of the rod, a motor is immediately braked . . . .'" (citations omitted)). Nakano's teaching is concerned with a similar problem—the risk to an operator from its telescoping tube inadvertently retracting, bringing the operator too close to the rotating blade. *See, e.g.*, Ex. 1015, 5 ("[T]here is provided an electric working machine including: a motor; a fixed part provided with a handle having a grip portion; and a movable part held by the fixed part, configured to be extendible by sliding relative to the fixed part, and including a cutting blade disposed on a

distal end of a movable pipe . . . [and] a detection unit configured to detect whether or not the movable part is positioned at a predetermined extended position relative to the fixed part . . . ."), 18–20 (describing the detection unit).

Next, Patent Owner argues that Petitioner failed to demonstrate that a person having ordinary skill in the art would have been motivated to combine the teachings of Outils, Roelle, Matsunaga, Langdon, and Nakano. Prelim. Resp. 47. Patent Owner argues that "Petitioner at best argues that a [person having ordinary skill in the art] would have combined Outils ***individually*** with Roelle, Matsunaga, Langdon, Nakano or CFR 1205.05." *Id.* at 48.

We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position. Petitioner relies on the secondary references of Roelle, Matsunaga, Langdon, and Nakano for teaching discrete elements. *See* Pet. 33–44, 51–64. Patent Owner does not direct us to any teachings in any of the references that would suggest an incompatibility in the collective teachings.

Patent Owner's reliance on the Board's decision in *VIZIO, Inc. v. Nichia Corp.*, IPR2017-01608, Paper 72 (PTAB Jan. 9, 2019), is misplaced. Prelim. Resp. 48. In that case, the Board determined that the petition failed to provide *any* specific analyses for the combination of multiple references. *See VIZIO, Inc.*, Paper 72 at 39. Here, Petitioner provides detailed analyses as to the combined teachings of Outils, Roelle, Matsunaga, Langdon, and Nakano.

Finally, Patent Owner argues that Petitioner does not assert that a person having ordinary skill in the art would have had a reasonable

expectation of success in combining the teachings as proposed. Prelim. Resp. 48. We have considered Patent Owner's argument, but do not find it sufficient, at this stage of the proceeding, to demonstrate a deficiency in Petitioner's position, for the same reasons as we discuss above in connection with our analysis of claim 1. That is, we determine, based on the current record, that the references themselves demonstrate a sufficient reasonable expectation of success.

IV. CONCLUSION

After considering all the evidence and arguments presently before us, we determine Petitioner has established a reasonable likelihood that it would prevail with respect to at least one of the Challenged Claims. Accordingly, we institute an *inter partes* review on all Challenged Claims and grounds.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted as to claims 1–20 of U.S. Patent No. 9,826,686 B2; and

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

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