

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

Petitioner,

v.

CHERVON (HK) LIMITED,

Patent Owner.

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IPR2020-00884

Patent 9,596,806 B2

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Before BARRY L. GROSSMAN, JAMES J. MAYBERRY, and  
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

MAYBERRY, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining No Challenged Claims Unpatentable

*35 U.S.C. § 318(a)*

ORDER

Granting Petitioner's Motion to Add Real Parties-in-Interest

*37 C.F.R. § 42.8*

Dismissing Patent Owner's Motion to Strike

*37 C.F.R. § 42.23(b)*

Granting Petitioner's Motion to Seal

*37 C.F.R. § 42.54*

## I. INTRODUCTION

### A. *Background and Summary*

One World Technologies, Inc., doing business as Techtronic Industries Power Equipment (“Petitioner”), filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–13 (the “Challenged Claims”) of U.S. Patent No. 9,596,806 B2 (Ex. 1001, “the ’806 patent”). Pet. 1. Chervon (HK) Ltd. (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 11. We instituted trial on all Challenged Claims and grounds. Paper 20.

Prior to our Institution Decision and 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 reserved judgment on the RPI Motion until the parties developed a complete record at trial. Paper 20, 35 (citing *SharkNinja Operating LLC v. iRobot Corp.*, IPR2020-00734, Paper 11 at 18 (PTAB Oct. 6, 2020) (precedential)).

Patent Owner filed a Patent Owner Response. Paper 25 (“PO Resp.”). Petitioner filed a Reply. Paper 39 (“Reply”). Patent Owner filed a Sur-reply. Paper 44 (“Sur-reply.”).

Patent Owner filed a Motion to Seal (Paper 26), and Petitioner filed a Non-Opposition to Patent Owner’s Motion to Seal (Paper 32). We denied Patent Owner’s Motion to Seal and authorized Petitioner to file a renewed motion. Paper 38, 7. Petitioner filed its Motion to Seal (Paper 28, “Mot. Seal”), which Patent Owner does not oppose.

With our authorization (Paper 42), Patent Owner filed a Motion to Strike portions of the Reply. Paper 43. Petitioner opposes this Motion. Paper 47.

We conducted an oral hearing on August 5, 2021, and the record includes a copy of the transcript of that hearing. Paper 53 (“Tr.”).

For the reasons discussed below, we conclude that Petitioner does not prove, by a preponderance of the evidence, that any of the Challenged Claims are unpatentable.

*B. Real Parties in Interest*

Petitioner identifies itself, Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc., as the real parties-in-interest. Pet. 1; RPI Motion 1.<sup>1</sup> Patent Owner identifies itself and Chervon North America Inc., an exclusive licensee of the ’806 patent, as real parties-in-interest. Paper 5, 1.

*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 ’806 patent. Pet. 1; Paper 5, 1. Petitioner identifies U.S. Patent Nos. 9,060,463 B2; 9,826,686 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 involved in the district court litigation. Pet. 1. Petitioner indicates that it filed *inter partes* review and post-grant review petitions challenging the

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<sup>1</sup> In its RPI Motion, Petitioner seeks to update its mandatory notices to add Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc. as real parties-in-interest without changing the filing date of the Petition. RPI Motion 1. For the reasons provided in Section III.A, below, we grant Petitioner’s RPI Motion.

seven related patents, and an unrelated patent (U.S. Patent No. 9,648,805 B2).<sup>2</sup> *Id.*; see Paper 5, 1.

*D. The '806 Patent*

The '806 patent, titled “Control System for Controlling the Operation of a Gardening Tool,” issued March 21, 2017, from an application filed October 10, 2014, and claims priority to foreign patent applications filed October 10, 2013, and April 23, 2014. Ex. 1001, codes (54), (45), (22), (30).<sup>3</sup> The '806 patent relates to a control system that prevents a garden tool, such as a lawnmower, from operating when its handle is in an improper position. *See id.* at 1:17–57. A handle typically separates a user from the dangers posed by the rotating blade in the main body of the tool. *Id.* at 1:24–26. The '806 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 1:53–57.

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<sup>2</sup> These petitions are IPR2020-00883, IPR2020-00886, IPR2020-00887, IPR2020-00888, PGR2020-00059, PGR2020-00060, PGR2020-00061, and IPR2020-00885, respectively. We did not institute post-grant proceedings in IPR2020-00883, IPR2020-00885, PGR2020-00059, PGR2020-00060, and PGR2020-00061.

<sup>3</sup> The '806 patent was examined under the first inventor to file provisions of the America Invents Act (AIA). Ex. 1002, 390. Petitioner asserts, and Patent Owner does not deny, that the '806 patent claims priority to an application with a foreign filing date after March 16, 2013, which is the effective date of the AIA versions of 35 U.S.C. §§ 102 and 103. Pet. 4; PO Resp. 2–3.

We reproduce Figures 1 and 2 from the '806 patent below.

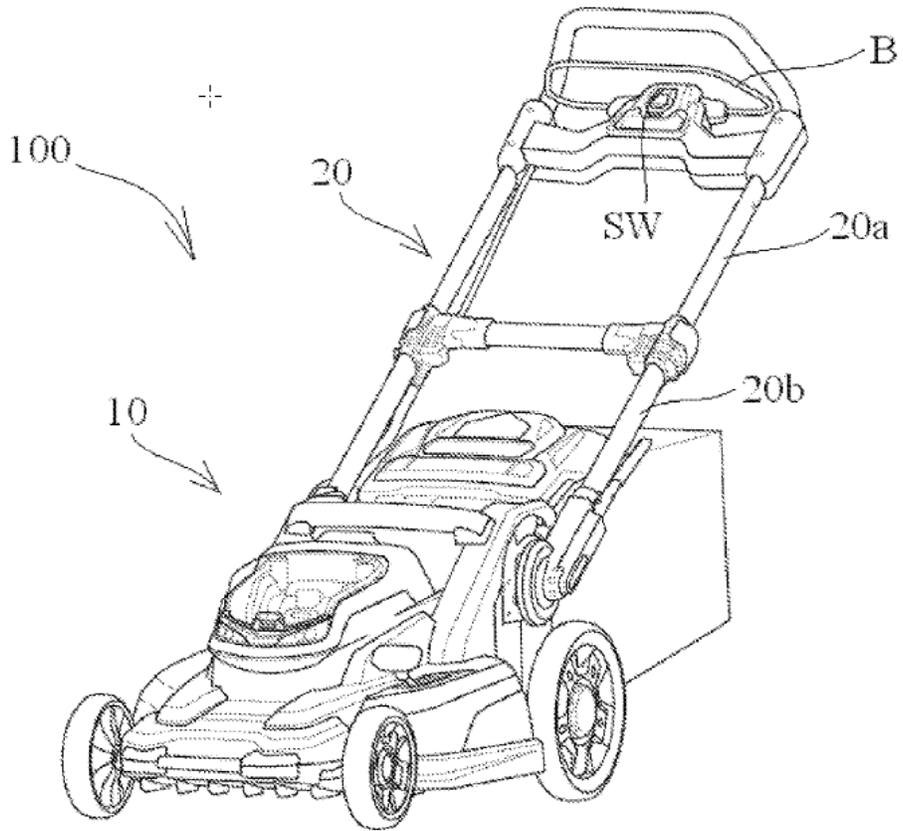


FIG.1

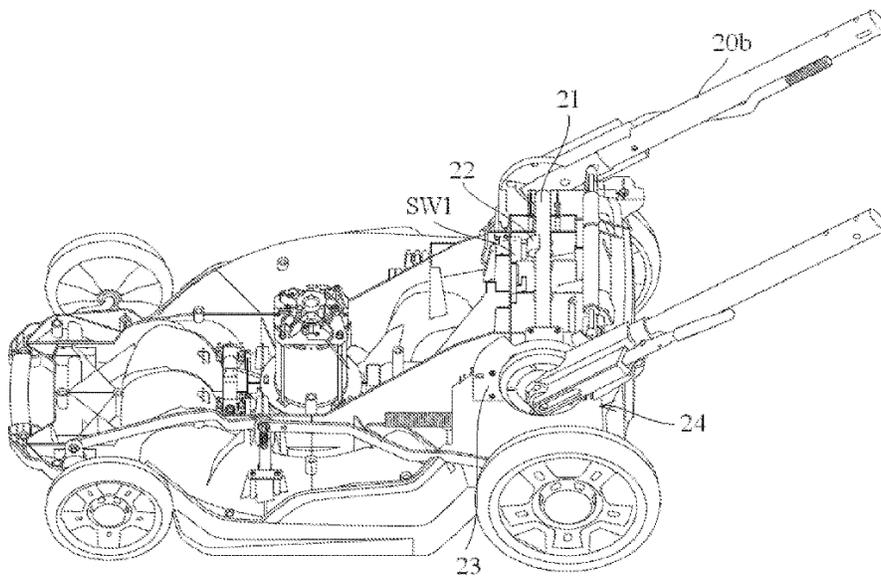


FIG.2

Figures 1 and 2 depict schematic views of an exemplary garden tool, lawnmower 100. Ex. 1001, 1:66–2:1. Mower 100 includes main body 10 and handle 20, which is rotatably connected to main body 10. *Id.* at 2:34–36. The end of handle 20 closest to the user includes an operation assembly, which includes trigger B. *Id.* at 2:49–56.

The user operates trigger B to start and stop the motor of mower 100. Ex. 1001, 2:55–58. Mower 100’s control system includes switch SW, which is a contact switch controlled by trigger B. *Id.* at 6:25–29. Switch SW “is connected in series in the power supply circuit.” *Id.* at 6:26–27.

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, 5:21–26. “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 5:27–34.

Mower 100’s control system includes SW1, which is a contact switch located on main body 10 near where handle 20 connects to main body 10. Ex. 1001, 6:54–58, 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 6:58–65. 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 6:40–44.

Handle 20 includes telescoping tubes 20*a* and 20*b*. Ex. 1001, Fig. 1. Mower 100’s control system includes a control device that monitors the telescopic position of handle 20. *Id.* at 7:15–19. When handle 20 is

telescoped into a designated position, switch SW2, disposed on tube 20*b*, is contacted by contact P on tube 20*a*, operating SW2. *Id.* at 7:35–47. SW2 is connected to the power supply circuit in series. *Id.* at 7:48–50. 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 7:22–25.

“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, 7:50–56. 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, 7:59–61. The brake is triggered when mower 100’s control system stops the mower’s engine. *Id.* at 7:61–63.

#### *E. Illustrative Claims*

Of the Challenged Claims, claims 1 and 6 are independent. Claim 1 is representative, and we reproduce it, below.

1. A gardening tool, comprising:
  - a main body at least having a functional accessory and a motor for driving the functional accessory;
  - a handle rotatably connected to the main body and at least having one operation assembly for being operated by a user to control the motor when the handle is located in a predetermined position; and
  - a control system for preventing the motor from being controlled by the operation assembly and halting the motor when the handle is located out of the predetermined position, the control system comprising:
    - a first control device configured to be controlled by the operation assembly, and

a second control device disposed at a position proximate to a shaft of the handle and configured to be controlled according to the rotating position of the handle wherein when the handle rotates to the 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 a position other than the designated 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 or a signal source device for sending a control signal to the power supply circuit.

Ex. 1001, 8:16–44.

*F. Prior Art and Asserted Grounds*

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

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>
1, 2, 6, 7, 12	103	Outils, <sup>4</sup> Matsunaga <sup>5</sup>
3, 4, 8, 9, 13	103	Outils, Matsunaga, Langdon, <sup>6</sup> Nakano <sup>7</sup>
5, 10	103	Outils, Matsunaga, Meldahl <sup>8</sup>

<sup>4</sup> Outils Wolf Societe Anonyme, FR 2 768 300 A1, published Mar. 19, 1999 (Ex. 1014, “Outils”). Exhibit 1014 is a certified English translation of Exhibit 1013. *See* Ex. 1013; Ex. 1014, 26 (providing certification).

<sup>5</sup> Matsunaga et al., US 8,098,036 B2, issued Jan. 17, 2012 (Ex. 1006, “Matsunaga”).

<sup>6</sup> Langdon, US 5,209,051, issued May 11, 1993 (Ex. 1012, “Langdon”).

<sup>7</sup> Nakano et al., WO 2013/122266 A3, published Aug. 22, 2013 (Ex. 1015, “Nakano”).

<sup>8</sup> Meldahl, US 3,253,391, issued May 31, 1966 (Ex. 1004, “Meldahl”).

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>
11	103	Outils, Matsunaga, Milcoy, <sup>9</sup> Hilchey <sup>10</sup>

Petitioner relies on declaration testimony of Mr. E. Smith Reed (Ex. 1003) in support of these grounds. In response, Patent Owner relies on the declaration testimony of Mr. Fred P. Smith. Ex. 2027. The record includes a transcript of Patent Owner’s deposition of Mr. Reed (Ex. 2028), and a transcript of Petitioner’s deposition of Mr. Smith (Ex. 1040).

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, 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 upward. *Id.* at 8:22–29.

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<sup>9</sup> Milcoy, US 3,823,291, issued July 9, 1974 (Ex. 1016, “Milcoy”).

<sup>10</sup> Hilchey et al., US 4,476,643, issued Oct. 16, 1984 (Ex. 1017, “Hilchey”).

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

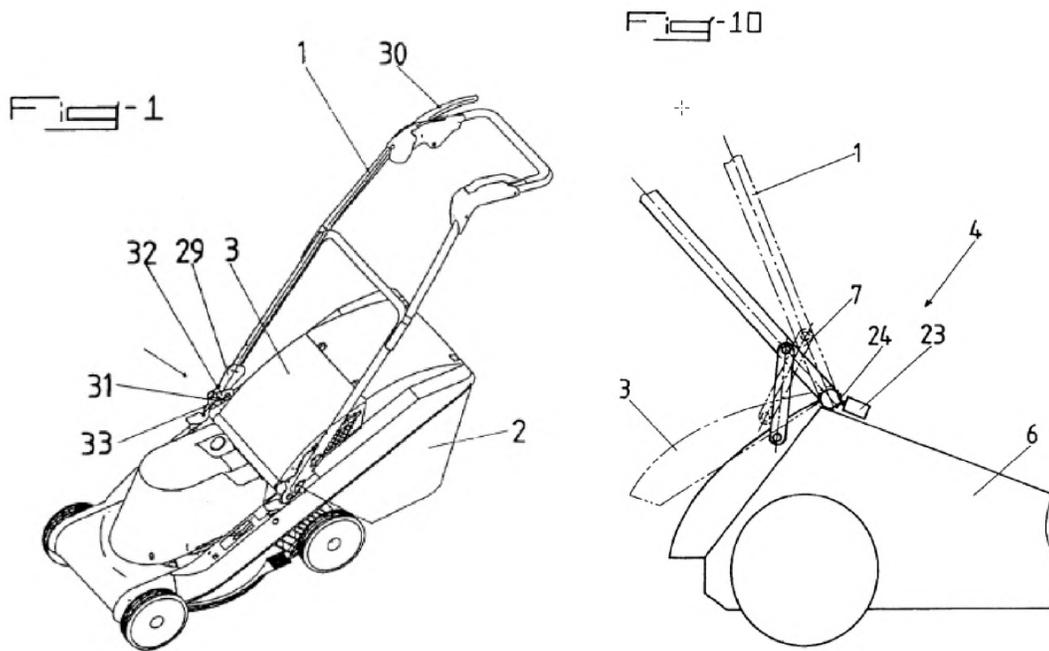


Figure 1 depicts “a perspective view of a mower,” and Figure 10 depicts a “partial schematic view[] showing [an] embodiment[] of the cutting-blade activation means” for a mower. Ex. 1014, 3:5–6, 3:22–23. Outils's lawnmower includes handlebar 1, cut-grass receiving receptacle 2, and safety cover 3. *Id.* 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. *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.

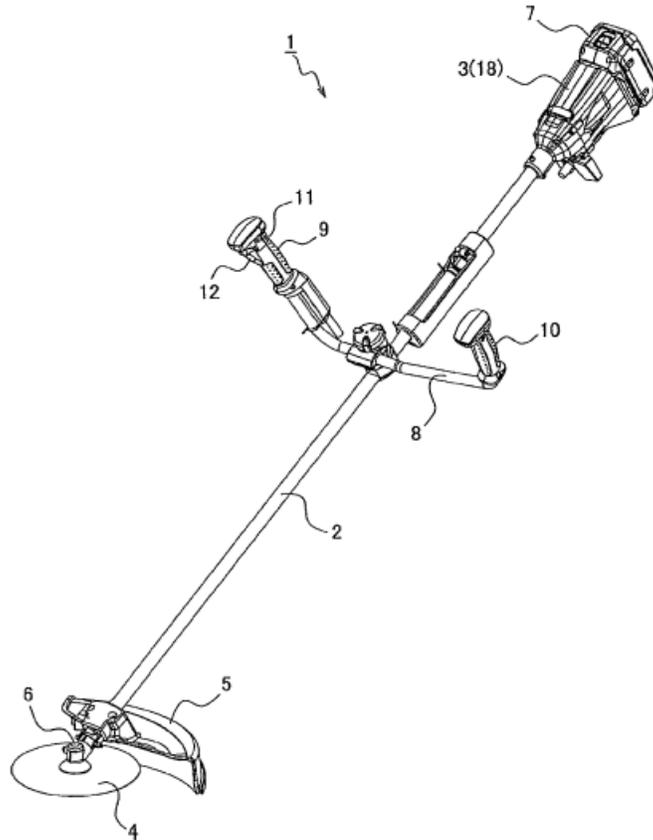


FIG. 2

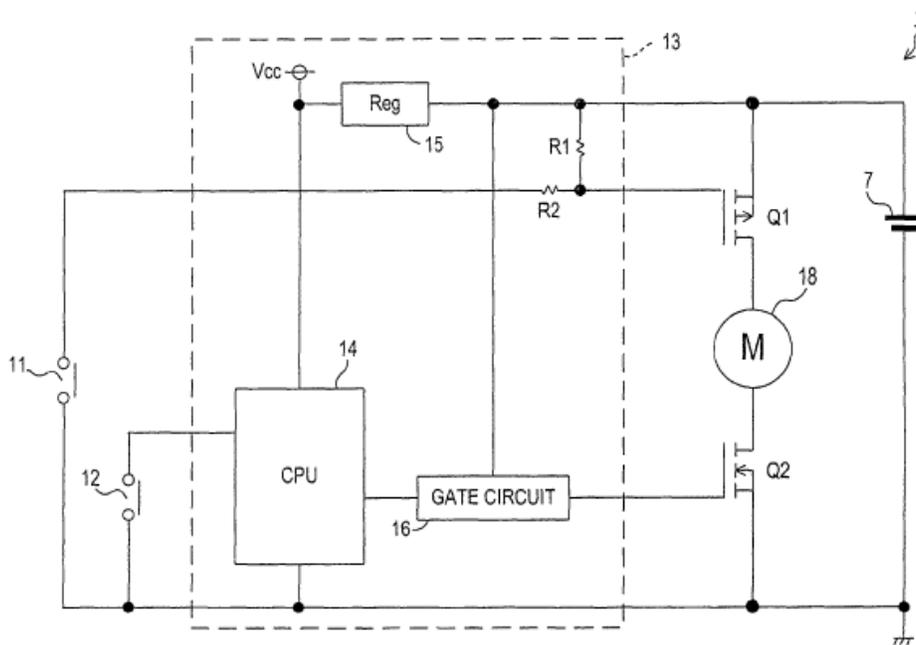


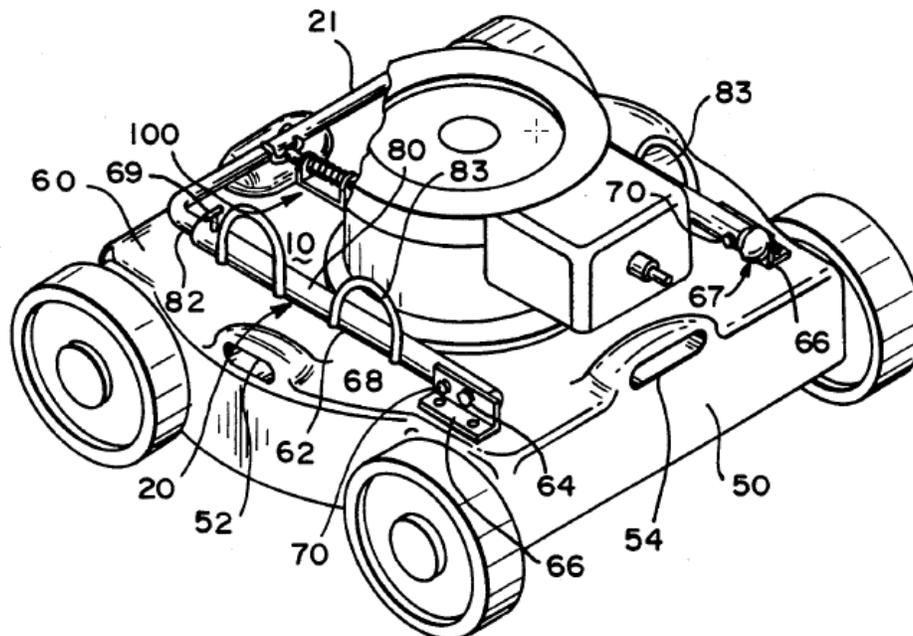
Figure 1 depicts “a perspective view showing an overall appearance of a rechargeable grass mower,” and Figure 2 depicts “an electrical circuit diagram showing a configuration of the rechargeable grass mower” of Figure 1. Ex. 1006, 6:6–10. Motor unit 3 of rechargeable grass mower 1 includes motor 18 and 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.

### 3. *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.

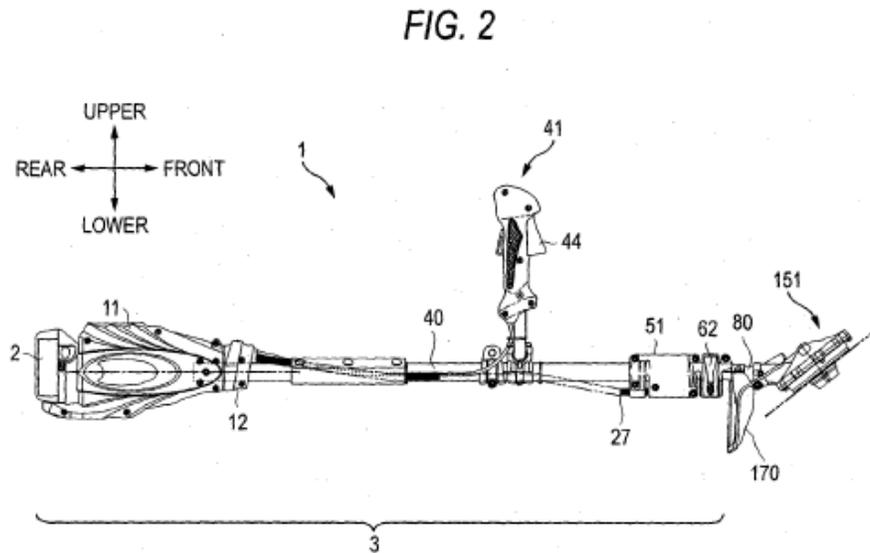
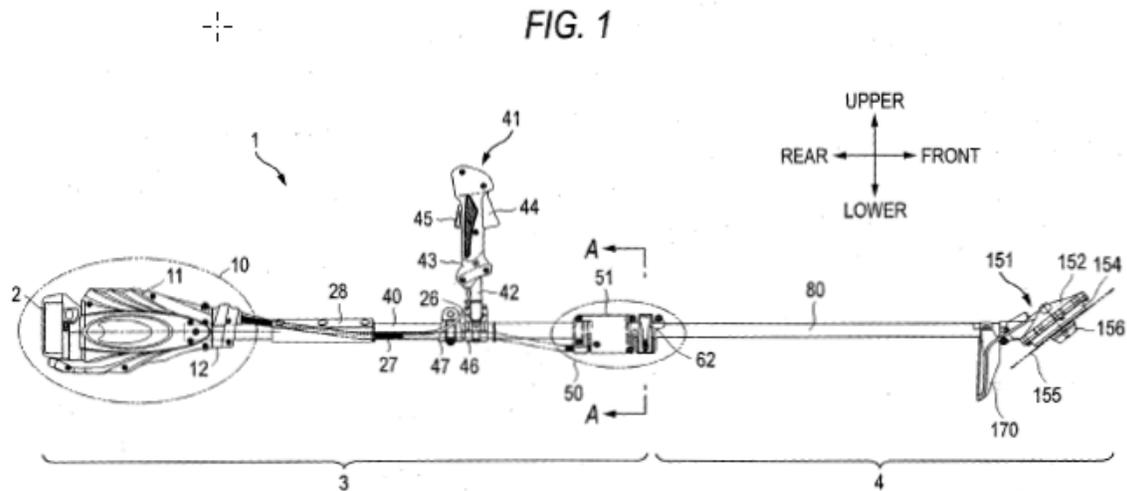


**FIG. 5**

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 proceeding, 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.

4. 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.<sup>11</sup> We reproduce Nakano’s Figures 1 and 2, below.



<sup>11</sup> When we refer to Nakano, we reference the pagination of the publication, not the exhibit pagination provided by Petitioner.

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 proceeding, 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 position. *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).

##### 5. *Meldahl*

Meldahl, titled “Lawn Mower Control Mechanism,” issued May 31, 1966. Ex. 1004, 1. Meldahl provides a “combination blade brake and clutch for a rotary power lawn mower [that] renders the blade stationary and harmless whenever the mower handle is in a released or raised position.” *Id.* at 1:27–30.

We reproduce Meldahl's Figure 1, below.

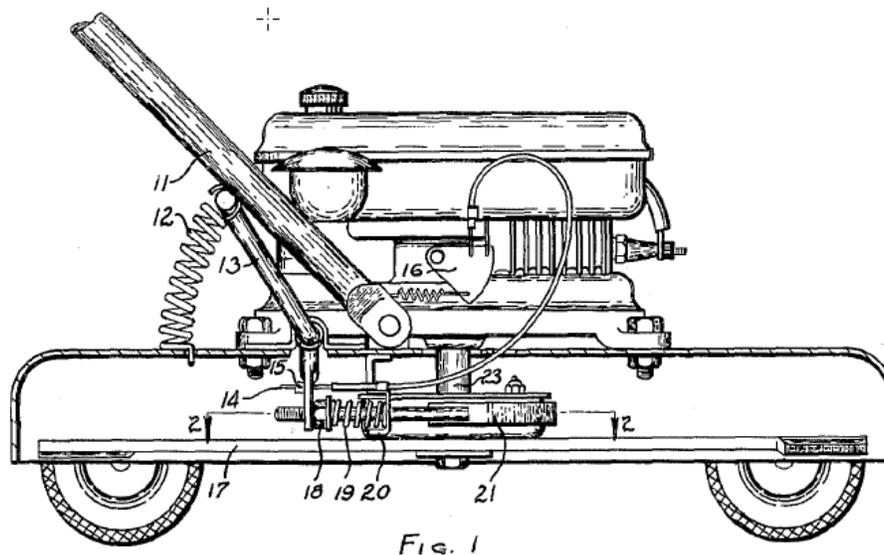


Figure 1 depicts “a view in side elevation showing one embodiment of [Meldahl’s] combination brake and clutch.” Ex. 1004, 2:8–10. Mower blade 17 rotates about the axis of shaft 23 and is fastened to brake drum 33 (seen in Meldahl’s Figure 2). *Id.* at 2:48–51, 2:56–57. In use, handle 11 pushes down on brake release lever 13, which causes band 21 to release brake drum 33, allowing blade 17 to rotate. *Id.* at 3:14–21. When a user releases handle 11, spring 12 causes the handle to raise, which causes lever 13 to move and, ultimately, band 21 to be set, stopping the rotation of blade 17. *Id.* at 3:17–21.

#### 6. Milcoy

Milcoy, titled “Electric Switch for Portable Electric Appliances,” issued July 9, 1974. Ex. 1016, codes (54), (45). Milcoy is directed to “[a]n electric switch [that] is particularly suitable for controlling the operation of a portable electric appliance . . . used mainly outdoors, for example lawn mowers.” *Id.* at 1:4–12.

We reproduce Milcoy's Figure 1, below.

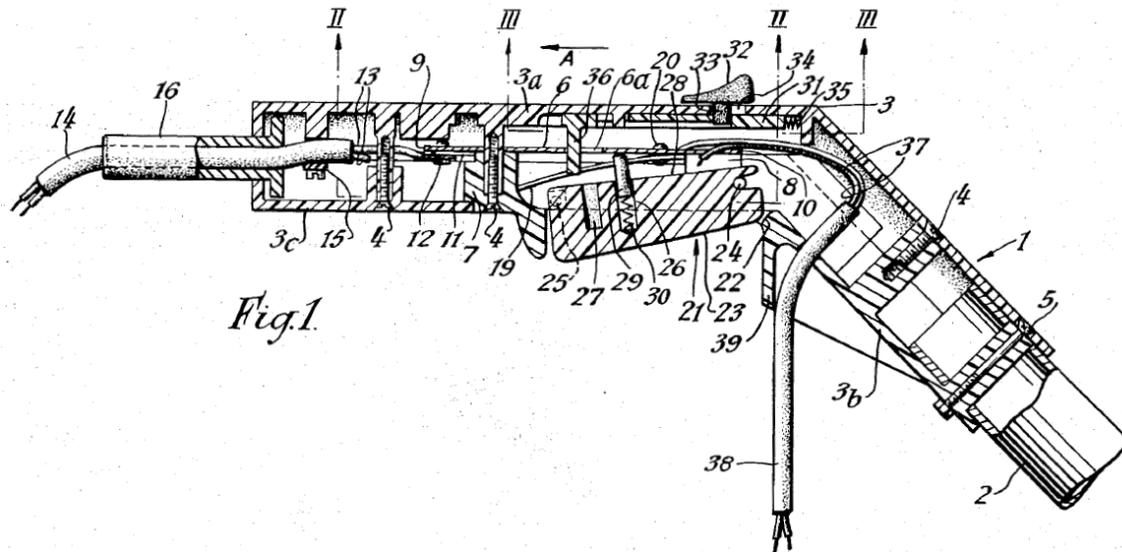


Figure 1 depicts “a cross-sectional view of part of the handle of a lawn mower incorporating [Milcoy’s] switch.” Ex. 1016, 2:54–55. Relevant to this Decision, contact actuating member (or trigger) 21 pivots against a biasing force (spring 30) to close a contact switch. *Id.* at 1:56–2:6, 3:35–63. The switch includes contact buttons 17 and 18, which are biased apart and trigger 21 overcomes this bias to close the contact. *Id.* at 1:56–2:6, 3:14–33. Milcoy’s switch “aims to . . . control[] a portable electric appliance” such that the appliance may not be powered on while the user is exposed to dangers from the lawnmower, such as when making adjustments. *Id.* at 1:14–39.

#### 7. Hilchey

Hilchey, titled “Hand Control System for Motorized Implements,” issued October 16, 1984. Ex. 1017, codes (54), (45). Hilchey is directed “to a hand control system for a motorized implement such as a . . . lawn mower.” *Id.* at 1:5–12.



## II. ANALYSIS OF THE CHALLENGED CLAIMS

### A. *Applicable Law*

In *inter partes* reviews, a petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to the patent owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in this proceeding, Petitioner must support its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d) (2020). Accordingly, all of our findings and conclusions are based on a preponderance of the evidence standard.

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

Section 103[] 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.<sup>12</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“An invention is not obvious just ‘because all of the elements that comprise the invention were known in the prior art.’” *Broadcom Corp. v.*

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<sup>12</sup> The parties do not direct us to any objective evidence in the complete record.

*Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013) (quoting *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1351 (Fed. Cir. 2010)). Instead, “a finding of obviousness at the time of invention requires a ‘plausible rational[e] as to why the prior art references would have worked together.’” *Id.* (quoting *Power-One*, 599 F.3d at 1352). Even when an obviousness argument relies on “combining multiple embodiments from a single reference, . . . there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination.” *In re Stepan*, 868 F.3d 1342, 1346 n.1 (Fed. Cir. 2017).

“[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 ’806 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. 12–13 (referencing Ex. 1003 ¶ 42).

Patent Owner adopts Petitioner’s proposed level of ordinary skill in the art. PO Resp. 3.

In this Final Written Decision, we apply Petitioner’s definition of the level of ordinary skill in the art. We find, on the complete trial record, that this definition is consistent with the level of ordinary skill reflected in the prior art of record and the skill reflected in the Specification of the ’806 patent.

*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). 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 [’806 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. 13. Petitioner offers express constructions for four claim terms—“power supply circuit,” “trigger,” and the related terms “locks” and “unlocks.” *Id.* at 14–18.

Patent Owner contends that the terms “power supply circuit” and “trigger” do not require express construction. PO Resp. 9–10. With respect to the terms “locks” and “unlocks,” “Patent Owner does not dispute Petitioner’s proposed constructions.” *Id.* at 10.

In our Institution Decision, we construed the term “locks” to at least encompass Petitioner’s construction of “electrically disabling,” and the term

“unlocks” to encompass Petitioner’s construction of “electrically enabling.” Paper 20, 39–42. After review of the complete trial record, we discern no reasons to modify these constructions.

Also, as will be evident from our analysis below, we need not construe the terms “power supply circuit” and “trigger” to resolve the parties’ dispute. *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))).

*D. Ground 1: Claims 1, 2, 6, 7, and 12 as Obvious Over Outils and Matsunaga*

Petitioner contends that the combination of Outils and Matsunaga renders obvious independent claims 1 and 6, and claims 2, 7 and 12, which depend from claim 1 or claim 6. The parties dispute whether Petitioner has demonstrated, by a preponderance of the evidence, that Outils discloses a control system comprising both a first control device and a second control device.<sup>13</sup>

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, focusing on certain claim limitations relevant to the parties’ dispute.

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<sup>13</sup> Petitioner does not rely on Matsunaga for any teachings directed to the control system comprising both a first control device and a second control device. *See* Pet. 34–37; PO Resp. 14 n.1.

1. *Independent claim 1*

a) *Handle limitation*

Claim 1 recites, in relevant part, “a handle rotatably connected to the main body and at least having one operation assembly for being operated by a user to control the motor when the handle is located in a predetermined position.” Ex. 1001, 8:19–22 (the “handle limitation” of claim 1). Petitioner contends that Outils’s handle 1 is rotatably connected to casing 6, the alleged main body. Pet. 31 (referencing Ex. 1014, Figs. 1, 4–7, 10, 11; Ex. 1003 ¶ 70).

Petitioner contends that a user operates Outils’s hold-to-run control 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 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 find that Outils discloses the subject matter of the handle limitation of claim 1. Outils discloses that means 28 controls the activation or rotation of the cutting blade and includes hold-to-run control component 30 that actuates remote cable 29, which acts on (1) a motor brake, (2) a brake coupling, or (3) an electrical supply contactor. Ex. 1014, 4:5–8. Significant to our analysis, means 28 is associated with “a first embodiment of the invention, specifically shown in Fig[ures] 1 to 4.” *Id.* at 3:35–4:12.

To the extent that any of Patent Owner's arguments implicate the handle limitation, we address the arguments below, in connection with our analysis of the control system limitation.

*b) Control system limitation*

Claim 1 also recites, in relevant part, "a control system for preventing the motor from being controlled by the operation assembly and halting the motor when the handle is located out of the predetermined position."

Ex. 1001, 8:23–26. Claim 1 continues:

the control system comprising:

a first control device configured to be controlled by the operation assembly, and

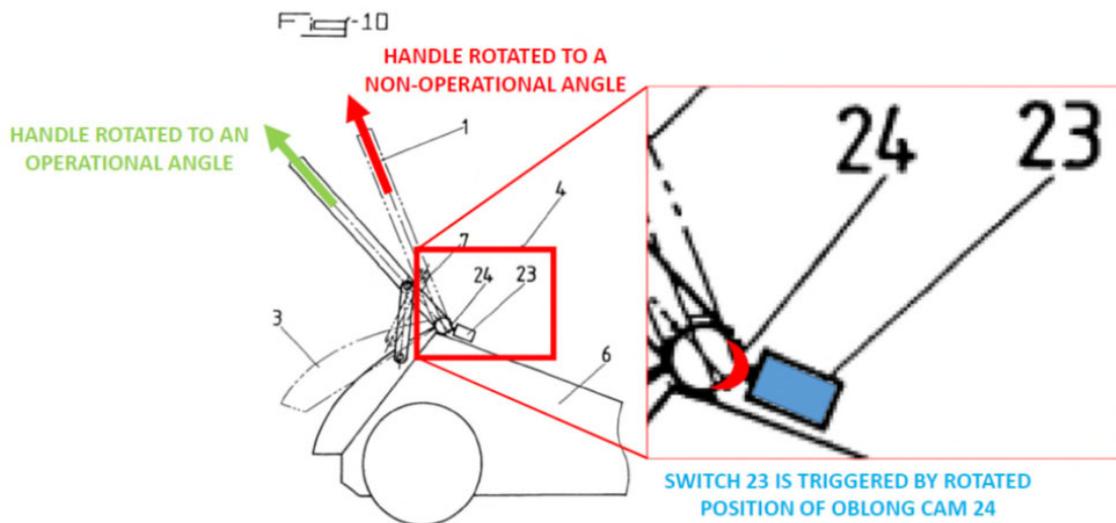
a second control device disposed at a position proximate to a shaft of the handle and configured to be controlled according to the rotating position of the handle wherein when the handle rotates to the designated position relative to the main body, the second control device unlocks the first control device so that the first control device allows starting of the motor, and when the handle rotates to a position other than the designated 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, 8:26–40 (the "control system" limitation of claim 1).

*(1) Petitioner's contentions*

Petitioner contends that Outils's Figure 10 depicts the recited control system, which includes actuator 23 and cam 24. Pet. 34 (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." *Id.* at 34–35 (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 35 (referencing Ex. 1014, 8:28; Ex. 1003 ¶ 76) (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.



Pet. 35. The annotated version of Figure 10 illustrates handle 1 in operational and non-operational positions, and how cam 24 interacts with actuator 23 based on the handle position.

With respect to the recited “first control device,” Petitioner contends that Outils discloses that its operation assembly, including hold-to-run component 30, controls an electrical supply contactor and that this contactor corresponds to the recited first control device. Pet. 36 (referencing Ex. 1014, 4:5–12; Ex. 1003 ¶ 78).

With respect to the recited “second control device,” Petitioner contends that Outils’s actuator 23 is the recited second control device. Pet. 37. 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, actuator 23 unlocks the electrical supply contactor (the alleged first control device) so that the first control device allows starting of the motor. *Id.* When handle 1 rotates out of the predetermined position, actuator locks the electrical supply contactor, so that the motor cannot start. Pet. 37 (referencing Ex. 1003 ¶ 79); *see also* Pet. 34–35 (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).

(2) *Patent Owner’s response*

Patent Owner argues that Petitioner has not demonstrated that Outils discloses a second control device. PO Resp. 14. Patent Owner argues that the “second control device” must unlock and lock the “first control device,” to allow the motor to start (unlock), or not allow it to start (lock). *Id.* at 15.

Specifically, Patent Owner argues that Petitioner fails to demonstrate that Outils’s actuator 23, the alleged “second control device,” interacts with Outils’s electrical supply contactor, the alleged “first control device.” PO Resp. 15. Patent Owner explains that “actuator 23 and the electrical supply contactor are components of *separate, distinct embodiments* of Outils’[s] disclosed . . . ‘safety device.’” *Id.* at 15–16 (referencing Ex. 2027 ¶¶ 58–61, 97; Ex. 2028, 89:2–10). Patent Owner adds that, because these components are from distinct embodiments, actuator 23 cannot lock or unlock the

electrical supply contactor. *Id.* at 16. In other words, Patent Owner argues that actuator 23 cannot lock or unlock the electrical supply contactor because the contactor is not part of the same mower.

Patent Owner also argues that Petitioner does not propose that it would have been obvious to combine components from distinct embodiments, nor does Petitioner provide any reason why a person having ordinary skill in the art would have combined these components. PO Resp. 16. Patent Owner adds that there would be no reason to combine the components, as hold-to-run component 30 with remote cable 29 and actuator 23 serve the same purpose—to stop the motor when the handle rotates out of a predetermined position. *Id.* at 17.

Patent Owner also argues that even if actuator 23 and the electrical supply contactor were in the same embodiment, Petitioner fails to demonstrate that actuator 23 locks or unlocks the electrical supply contactor, or that the electrical supply contactor “functions to *start* the motor.” PO Resp. 17–18; *see e.g.*, Ex. 1001, 8:37–40 (reciting “the second control device locks the first control device so that the first control device is not allowed to start the motor”).

(3) *Petitioner's reply and Patent Owner's sur-reply*

Petitioner replies that, in the embodiment of Outils's Figure 1, the disclosed device employs a Bowden cable<sup>14</sup> (cable 29) to turn off the electrical supply contactor when the handle rotates out of its in-use position, stopping the motor. Reply 6–7. Petitioner adds that the embodiments of Figures 5–10, including actuator 23, disclosed in Figure 10, are alternatives to the Bowden cable. *Id.* at 7.

Petitioner argues that although “the *Bowden cable* of Figure 1 is replaced in Figure 10, [a person having ordinary skill in the art] would understand Figure 10 must still include a user's on/off component even though none is illustrated.” Reply 7. Petitioner adds that a person having ordinary skill in the art would have known “that Outils *must* have a manual on/off component, and it must be atop Outils'[s] handle 1 just like component 30 (Figure 1) with its own associated contactor because 16 CFR 1205.5(c) mandates it.” *Id.* at 7–8 (citing, also, testimony from Mr. Smith, Ex. 2027 ¶ 100). Petitioner argues that safety regulations require a mower to “have their normal starting means located within the operating control zone,” and “[t]he user's on/off control must ‘[r]equire continuous contact with the control in order for the blade to continue to be driven.’” *Id.* at 8

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<sup>14</sup> A Bowden cable is “a coaxial small flexible cable that . . . is able to maintain its length and tension and an outer sleeve that is able to maintain its length and tension and compression, and when you pull the inner cable relative to the outer cable a certain distance at one end, the same distance is moved at the other end of . . . the inner cable. . . . It's a . . . remote control cable.” Ex. 2028 (Deposition transcript of E. Smith Reed), 140:11–22; *see also* Ex. 2027 (Smith Declaration) ¶ 125 (“I agree with Mr. Reed that a [person having ordinary skill in the art] would have understood Outils'[s] remote control cable 29 to be a Bowden cable.”); Ex. 1014, 5:4–8 (discussing one operation of cable 29).

(quoting Ex. 1008, which provides 16 C.F.R. Part 1205, “Safety Standard for Walk-Behind Power Lawn Mowers” (Jan. 1. 2012)).

Petitioner also replies that an artisan of ordinary skill “would have understood Outils’[s] Figure 10 to include hold-run-lever 30 (or comparable regulation-compliant component) and its electric[al] supply contactor from Figure 1 but without cable 29 acting as a Bowden cable.” Reply 9 (relying, in part, on Ex. 1014, 2:24–27). Petitioner adds that Patent Owner does not rebut the assertion that it would have been obvious to add an operational assembly to the embodiment of Figure 10. *Id.*; see Pet. 33 (providing obviousness argument as to the operational assembly); Ex. 1003 ¶ 74 (same).

Finally, Petitioner replies that “no [person having ordinary skill in the art] would interpret Outils’[s] mower as *not* having a user’s on/off contactor associated with lever 30” because of the requirements of 16 C.F.R. Part 1205. Reply 10.

Patent Owner replies that neither Outils’s Figure 10 nor the text describing the figure identifies hold-to-run component 30 or the electrical contactor. Sur-reply 6. Patent Owner again argues that Petitioner does not propose combining structures from different embodiments in its obviousness position. *Id.*

Patent Owner argues that Petitioner’s reply arguments represent a new theory—that a person having ordinary skill in the art would have understood Figure 10 to have a hold-to-run component and electrical contactor. Sur-reply 7. Patent Owner adds that Petitioner’s reliance on 16 C.F.R. Part 1205 is a new obviousness combination relying on the regulation as a new reference. *Id.* at 8. Patent Owner also argues that Petitioner’s reliance on Outils’s disclosure at page 2, lines 24–27 is misplaced, as it represents

general background, and is not directed to the embodiment of Figure 10. *Id.* at 8–9.

(4) *Analysis*

Upon review of the information in the Petition and corresponding evidence, and the parties’ arguments and counterarguments, we find that Petitioner fails to demonstrate, by a preponderance of the evidence, that Outils teaches or suggests the subject matter of the control system limitation, including both a first control device and a second control device. We find Petitioner fails to support its position that a person having ordinary skill in the art would have understood that the embodiment depicted in Outils’s Figure 10 includes a hold-to-run control *connected to an electrical supply contactor* with persuasive evidence.

At the outset, we agree with Patent Owner that Petitioner does not argue that it would have been obvious to combine Outils’s disclosure of hold-to-run control component 30 controlling an electrical supply contactor from the embodiment of Figure 1 with the embodiment of Figure 10. That is, we understand that Petitioner contends that a person having ordinary skill in the art would have understood that the embodiment of Outils’s Figure 10 already had a specific type of control device—the hold-to-run control component 30 controlling *an electrical supply contactor* from the embodiment of Figure 1. *See* Pet. 36 (indicating that the first control device is Outils’s electrical supply contactor); Reply 7 (“But while the *Bowden cable* of Figure 1 is replaced in Figure 10, [a person having ordinary skill in the art] would understand Figure 10 must still include a user’s on/off component even though none is illustrated.”); *see also* Reply 9 (“Thus, [a person having ordinary skill in the art] would have understood Outils’ Figure

10 to include hold-to-run lever 30 . . . and its electric supply contactor from Figure 1”).<sup>15</sup>

With this understanding, we turn to our analysis of Petitioner’s contentions. Specifically, we address (1) whether Outils discloses expressly a hold-to-run control component connected to an electrical supply contactor; (2) Petitioner’s contention that a person having ordinary skill in the art would have understood the embodiment of Outils’s Figure 10 to include a hold-to-run control component connected to an electrical supply contactor in light of Outils’s disclosure of control components other than an electrical supply contactor connected to hold-to-run control component 30 in the embodiment of Figure 1; (3) Petitioner’s reliance on 16 C.F.R. Part 1205 to support the understanding of a person having ordinary skill in the art; (4) Petitioner’s reliance on Outils’s disclosure at page 2, lines 24–27, to support the understanding of a person having ordinary skill in the art; and (5) Petitioner’s contention that it would have been obvious to add an operation assembly to the embodiment of Outils’s Figure 10.

First, it is undisputed that the text describing Figure 10 does not mention a hold-to-run control component connected to an electrical supply

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<sup>15</sup> A petitioner must explain why a person having ordinary skill in the art would have combined the elements, including those disclosed in separate embodiments described in a single reference. *See KSR Int’l Co.*, 550 U.S. at 418 (“[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.”); *In re Stepan*, 868 F.3d 1342, 1345–46 n.1 (Fed. Cir. 2017). Petitioner does not provide any such explanation, reinforcing our understanding that Petitioner relies on the position that a person having ordinary skill in the art would have understood the embodiment of Figure 10 to include, without modification, hold-to-run control component 30 controlling an electrical supply contactor from Figure 1.

contactor. *See* Ex. 1014, 8:22–9:13.<sup>16</sup> Similarly, Petitioner does not direct us to, nor do we discern, any depiction *associated with Outils’ Figure 10* of a hold-to-run control component connected to an electrical supply contactor.

Second, in describing the embodiment of *Figure 1*, Outils discloses that hold-to-run control component 30 can function in one of three different ways. Control 30, through remote control cable 29, can act on (1) a motor brake, (2) a brake coupling, or (3) an electrical supply contactor. *See* Ex. 1014, 4:5–8; *see also* Pet. 31 (acknowledging that Outils’[s] hold-to-run control component 30 “acts on a motor brake, a brake coupling *or* an electrical supply contactor” (emphasis added)). Neither Petitioner nor Mr. Reed persuasively explains why a person having ordinary skill in the art would have understood the embodiment of *Figure 10* to have hold-to-run control component 30 connected to *an electrical supply contactor*, rather than a motor brake or brake coupling. That is, Petitioner does not provide persuasive evidence supporting the contention that, out of the three *possible* control devices disclosed as connected to hold-to-run control component 30—a motor brake, a brake coupling, *or* an electrical supply contactor—a person having ordinary skill in the art would have understood from Outils’s disclosure that the embodiment of *Figure 10* specifically includes an electrical supply contactor.<sup>17</sup> Petitioner has not persuaded us that this embodiment, which includes actuator 23 and cam 24, also includes

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<sup>16</sup> Outils references Figures 9 and 10 at page 7, line 15. We understand this reference to be a typographical error. The reference should be to Figures 8 and 9, which include means 4 and actuator 20. *See* Ex. 1014, 7:15–8:20, Figs. 8, 9; Paper 20, 32; Reply 7 n.5.

<sup>17</sup> Again, as we discussed above, Petitioner does not argue that it would have been obvious to modify the embodiment of *Figure 10* to include an electrical supply contactor.

hold-to-run control component 30 and only the electrical supply contactor to the exclusion of the other two control components, much less that, in this embodiment, actuator 23 and cam 24 enable, i.e. unlocks, or disables, i.e., locks, hold-to-run control component 30 and the associated electrical supply contactor from starting the motor, as required by the control system limitation.

To the extent Mr. Reed's testimony provides any support for Petitioner's position, we give little weight to the testimony. Mr. Reed declares that a person having ordinary skill in the art would have interpreted Outils as disclosing that "Outils'[s] user-operated operation assembly 30 which would otherwise activate the motor does not work until that happens, and likewise the halted motor would remain halted until the mower components were reset." Ex. 1003 ¶ 76; *see also id.* at ¶ 78 (declaring "Outils'[s] 'electrical supply contactor' is the claimed 'first control device'" without providing additional explanation, including why the embodiment of Figure 10 includes the contactor). This testimony is conclusory, as it provides no supporting analysis or evidence that hold-to-run control component 30 is part of the embodiment of Figure 10, nor does it provide additional explanation of how actuator 23 acts on hold-to-run control component 30 and not a different start control element. *See* 37 C.F.R. 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."). That is, Mr. Reed presumes that hold-to-run control component 30, connected to an electrical supply contactor, is present in the embodiment of Figure 10, and that this structure interacts with actuator 23, without providing any underlying analysis to support these presumptions.

Mr. Reed, for example, provides no explanation as to why “operation assembly 30” is part of the embodiment of Figure 10 or how it “activate[s] the motor.” As another example, Mr. Reed does not describe, in his declaration, the role played in Outils’s mower by the electrical supply contactor, how that role may differ from a motor brake or brake coupling, or why a person having ordinary skill in the art would have understood that the embodiment of Figure 10 must have an electrical supply contactor over a motor brake or brake coupling. In yet another example, Mr. Reed does not explain in his declaration how the working of cable 29 in the embodiment of Figure 1 relates to actuator 23 and cam 24 in the embodiment of Figure 10, nor that a person having ordinary skill in the art would have understood that the configuration of Figure 10 would still include hold-to-run control component 30 and an electrical supply contactor, but without cable 29 (and, presumably, with a different cable). *See* Reply 7 (arguing that the Bowden cable (cable 29) of the embodiment of Figure 10 would have been replaced and citing to no evidence in support).<sup>18</sup>

Indeed, Mr. Reed’s testimony merely parrots language from the Petition. *Compare, e.g.,* Ex. 1003 ¶ 76, *with* Pet. 35. Such testimony, without more, provides little help to the Board as fact finder, because the expert fails to fill his or her role to help us “understand the evidence or [] determine a fact in issue.” *See* Fed. R. Evid. 702(a). Instead, we are often left with conclusory testimony with little or no supporting evidence.

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<sup>18</sup> We also do not discern where the Petition describes replacing cable 29 when the electrical supply contactor and hold-to-run control component 30 is employed in the embodiment of Figure 10. As Patent Owner argues, without such a modification, the control system of Figure 1 would be redundant with actuator 23 and cam 24, as the Bowden cable performs the same function as actuator 23 and cam 24. *See* PO Resp. 17.

Third, Petitioner’s reliance on 16 C.F.R. Part 1205 is unpersuasive. Section 1205.5(a) of the regulation requires “[a] walk-behind rotary power mower [to] have a blade control system that will perform the following functions: (1) [p]revent the blade from operating unless the operator actuates the control[, and] (ii) [r]equire continuous contact with the control in order for the blade to continue to be driven.” These requirements would be satisfied with any of the three control systems described in connection with Outils’s Figure 1—a hold-to-run control controlling an electrical supply contactor, a motor brake, *or* a brake coupling. Again, Petitioner does not persuasively explain why these regulations require a hold-to-run control controlling *an electrical supply contactor*, to the exclusion of the other two possible system components, such that a person having ordinary skill in the art would have understood the embodiment of Outils’s Figure 10 to have a hold-to-run control that controls an electrical supply contactor, nor how these regulations support a finding that actuator 23 locks and unlocks a first control device.

Petitioner characterizes these regulations as directed to a “manual on/off component.” Reply 8. We disagree. As is evident from the language of the regulations, Section 1205.5(a) is directed to a blade control system, with the “continuous contact” requirement associated with that system. *See* Ex. 1008, 8. Section 1205.5(c) independently requires “[w]alk-behind mowers with blades that begin operation when the power source starts [to] have their normal starting means located within the operating control zone.” *Id.* at 8. That is, the requirement for a starting means located in the operation control zone may be independent of any blade control associated with the “continuous contact” requirement.

Fourth, Petitioner’s reliance on Outils’s disclosure that, “[a]lthough the rotation of the cutting blade is subordinated to a hold-to-run safety control, the risk of injury due to projections or the accidental entry of a digit into the cutting zone cannot be entirely prevented, for the very reason that the actuation of this control is left up to the user,” is equally unavailing. *See* Reply 9 (quoting Ex. 1014, 2:24–27). We find that this statement provides support for additional safety measures, including the safety systems associated with cover 3. *See* Ex. 1014, 5:14–31, 6:5–18 (describing safety features associated with cover 3); *see also id.* at code (57) (“The mower is characterized in that it includes a safety device preventing access to the rotating cutting blade, while making it possible for the hooking and unhooking operations for the cut-grass receiving receptacle (2) to be carried out only when the blade is stationary.”), 2:29–34 (disclosing that “[t]he aim of the present invention” is to “ensure[] that the cut-grass receiving receptacle can be hooked and unhooked in a simple manner and protect[] the user against any risk of injury during or in between these operations”). Petitioner does not explain adequately, nor do we discern, how this statement would have informed a person having ordinary skill in the art that the mower includes hold-to-run control 30 *and the electrical supply contactor*, rather than a motor brake or a brake coupling, or why this statement is not directed to the safety systems for cover 3.

In relying on this disclosure in Outils, Petitioner characterizes the control relied on for the “first control device” as “the user’s on/off control.” Reply 9; *see also id.* at 7 (“But while the *Bowden cable* of Figure 1 is replaced in Figure 10, [a person having ordinary skill in the art] would understand Figure 10 must still include *a user’s on/off component* even though none is illustrated.” (emphasis added)). Indeed, at oral hearing,

Petitioner's counsel stated that "we're talking about the user operable on/off switch of a mower. I mean, it almost goes without saying that these devices have them." Tr. 73:18–20. We understand Outils's hold-to-run control component 30 to operate as a type of dead man's switch. As the name suggests, when a user holds the control, the blade will turn when the motor is energized, and, when the user releases the control, the blade will stop. Such a control does turn the rotation of the blade (and, perhaps, the motor) on or off. *See, e.g.*, Ex. 1014, 4:5–8 (describing means 28 for controlling the activation or rotation of the cutting blade), 4:14–17 (describing that cable 29 of means 28 interrupts the drive of the spindle of the blade *or* cuts the power).

Such a control, however, is not necessarily the only on/off control for a mower. For example, the mower may have a separate start/stop control. *See, e.g.*, Ex. 2027 ¶ 100 ("Notably, Outils does not disclose how the mower is started. Outils'[s] lawnmower could start in many different ways. For example, Outils'[s] lawnmower could have a pull cord, a separate start switch, a relay, etc."); Ex. 1014, 3:28–30 (indicating that the engine may be electric or thermal, which suggests different starting mechanisms). In this way, the hold-to-run control component 30 may still function as a safety system component to allow or not allow the blade to rotate (or possibly, the engine to operate), but it is not necessarily the only user-controlled on/off switch. *See* PO Resp. 18. Although we agree with Petitioner that a mower will have some user-controlled mechanism to start and stop the mower, it does not "go[] without saying" that a hold-to-run control and electrical supply contactor is necessarily that mechanism. Indeed, as we discussed above in addressing Petitioner's contention that 16 C.F.R. § 1205.5(c) requires a structure such as hold-to-run control component 30 connected to a

electrical supply contactor, 16 C.F.R. § 1205.5(c) requires a “normal starting means” within the operating control zone. It does not, however, require that starting means to be the same control specified in section 1205.5(a), requiring continuous contact. *See* Ex. 1008, 7–8. So, for these reasons, on the complete trial record, we find that Petitioner fails to persuasively demonstrate that Outils’s hold-to-run control component 30 and electrical supply contactor is necessarily the mower’s user operable on/off control.

Fifth, Petitioner’s contention that it would have been obvious to add *an operation assembly* to the embodiment of Outils’s Figure 10 does not remedy the deficiency in Petitioner’s position, relative to the claimed invention. Even if we agree with Petitioner that it would have been obvious to add an operation assembly to the embodiment of Figure 10, such a modification does not necessarily mean that the assembly would include hold-to-run control component 30 controlling an electrical supply contactor. Again, Petitioner does not adequately explain why the operation assembly could not include, for example, hold-to-run control component 30 controlling a motor brake or brake coupling as disclosed in Outils.

In summary, upon review of the information in the Petition and corresponding evidence, and the parties’ arguments and counterarguments, we find that Petitioner fails to demonstrate, by a preponderance of the evidence, that Outils teaches or suggests the subject matter of the control system limitation, *including both* a first control device and a second control device, including that the alleged second control device locks (and unlocks) the alleged first control device to prevent (or allow) the engine to start based on whether the handle is in a designated position, for the reasons discussed above.

*c) 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 the power supply circuit.” Ex. 1001, 8:41–44. Because we find that Petitioner fails to demonstrate, by a preponderance of the evidence, that the combination of Outils and Matsunaga teaches or suggests the subject matter of the control system limitation, we need not address the switch limitation.

*d) Conclusion*

For the reasons discussed above, we conclude, on the complete trial record, that Petitioner fails to demonstrate, by a preponderance of the evidence, that claim 1 is unpatentable under 35 U.S.C. § 103 over Outils and Matsunaga.

*2. Independent claim 6*

Petitioner combines its analysis for independent claims 1 and 6. *See* Pet. 29–41. For the reasons discussed above in connection with our analysis of independent claim 1, we conclude that Petitioner fails to demonstrate, by a preponderance of the evidence, that claim 6 is unpatentable under 35 U.S.C. § 103 over Outils and Matsunaga.

*3. Dependent claims 2, 7, and 12*

Dependent claim 2 depends directly from claim 1, and claims 7 and 12 depend directly from claim 6. For the reasons discussed above in connection with our analysis of independent claims 1 and 6, we conclude that Petitioner fails to demonstrate, by a preponderance of the evidence, that claims 2, 7, and 12 are unpatentable under 35 U.S.C. § 103 over Outils and Matsunaga.

*E. Ground 2: Claims 3, 4, 8, 9, and 13 as Obvious Over Outils, Matsunaga, Langdon, and Nakano*

Claims 3 and 4 depend from claim 1, and claims 8, 9, and 13 depend from claim 6. Petitioner contends that claims 3, 4, 8, 9, and 13 are unpatentable under 35 U.S.C. § 103 over Outils, Matsunaga, Langdon, and Nakano. Pet. 41–56. Petitioner does not contend that Langdon or Nakano remedies the deficiencies we identified above, in connection with our analysis of independent claims 1 and 6. Accordingly, for the reasons discussed in our analysis of Ground 1, Petitioner fails to demonstrate, by a preponderance of the evidence, that claims 3, 4, 8, 9, and 13 are unpatentable under 35 U.S.C. § 103 over Outils, Matsunaga, Langdon, and Nakano.

*F. Ground 3: Claims 5 and 10 as Obvious Over Outils, Matsunaga, and Meldahl*

Claim 5 depends directly from claim 1, and claim 10 depends directly from claim 6. Petitioner contends that claims 5 and 10 are unpatentable under 35 U.S.C. § 103 over Outils, Matsunaga, and Meldahl. Pet. 56–60. Petitioner does not contend that Meldahl remedies the deficiencies we identified above, in connection with our analysis of independent claims 1 and 6. Accordingly, for the reasons discussed in our analysis of Ground 1, Petitioner fails to demonstrate, by a preponderance of the evidence, that claims 5 and 10 are unpatentable under 35 U.S.C. § 103 over Outils, Matsunaga, and Meldahl.

*G. Ground 4: Claim 11 as Obvious Over Outils, Matsunaga, Milcoy, and Hilchey*

Claim 11 depends directly from claim 6. Petitioner contends that claim 11 is unpatentable under 35 U.S.C. § 103 over Outils, Matsunaga, Milcoy, and Hilchey. Pet. 60–65. Petitioner does not contend that Milcoy

or Hilchey remedies the deficiencies we identified above, in connection with our analysis of independent claims 1 and 6. Accordingly, for the reasons discussed in our analysis of Ground 1, Petitioner fails to demonstrate, by a preponderance of the evidence, that claim 11 is unpatentable under 35 U.S.C. § 103 over *Outils*, *Matsunaga*, *Milcoy*, and *Hilchey*.

### III. PROCEDURAL CONSIDERATIONS

#### *A. Compliance with 35 U.S.C. § 312(a)(2) – Petitioner’s RPI Motion*

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 2 (PTAB Oct. 2, 2020) (precedential). 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) (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).

Petitioner moves to amend its mandatory notices to add Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc. (the “Disputed Entities”<sup>19</sup>) as real parties-in-interest without changing the filing date of the Petition. RPI Motion 1. Patent Owner opposes the motion. RPI Opposition; PO Resp. 42–52.<sup>20</sup>

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,

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<sup>19</sup> Patent Owner originally argued that these three entities were omitted as real parties-in-interest. RPI Opp. 1. Patent Owner later focuses on only two of these entities—Techtronic Industries Co. Ltd. and Homelite Consumer Products, Inc. PO Resp. 42.

<sup>20</sup> In our Decision instituting trial in this proceeding, in reserving judgment on the RPI Motion until the end of trial, we allowed the parties to develop further the record with respect to the RPI issue at trial, and both parties address the issue in post-institution filings. *See* PO Resp. 42–52; Reply 25–27.

allow the petitioner to add a real party in interest.” (quoting *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc)). As such, a petitioner may amend its mandatory notices to add a real party-in-interest and still maintain its original filing date. *See, e.g., Adello Biologics LLC v. Amgen Inc.*, PGR2019-00001, Paper 11, 5 (PTAB Feb. 14, 2019) (precedential) (authorizing pre-institution update to Mandatory Notices to add a RPI); *Proppant Express Investments, LLC v. Oren Techs., LLC*, IPR2017-01917, Paper 86, 7 (PTAB Feb. 13, 2019) (precedential) (“The Board may, under 35 U.S.C. § 312(a), accept updated mandatory notices as long as the petition would not have been time-barred under 35 U.S.C. § 315(b) if it had included the real party in interest.”) (“*Proppant*”).

In determining whether to permit a petitioner to amend its mandatory notices to add a real party-in-interest while maintaining the original filing date, we consider “whether there have been (1) attempts to circumvent the § 315(b) bar or estoppel rules, (2) bad faith by the petitioner, (3) prejudice to the patent owner caused by the delay, or (4) gamesmanship by the petitioner.” *Proppant*, Paper 86, 6–7.

With respect to the § 315(b) bar, Petitioner states that “if the three new entities are added as RPIs without changing the present petition’s filing date, no time bar under 35 U.S.C. 315(b) would result.” RPI Motion 7; *see also* Reply 26–27 (arguing that it is an “indisputable fact” that none of the Disputed Entities are time-barred under § 315). Patent Owner does not dispute this contention. *See* RPI Opp.; PO Resp. 42–52.

Petitioner asserts that Techtronic Industries Co. Ltd. and Techtronic Industries North America, Inc., are Petitioner’s grandparent and parent investment holding companies, respectively, with no control over the filing of a petition in this proceeding. RPI Mot. 4–5 (citing Exs. 2005, 2006).

Petitioner also asserts that these “holding companies exercise no control over the daily operations of Petitioner, and Petitioner had no obligation to consult with them or obtain their permission to file the present Petition.” *Id.* at 5 (citing Ex. 1036 ¶ 4).

Petitioner also asserts that Homelite Consumer Products, Inc., is a “sister company of Petitioner and wholly owned by Techtronic Industries North America, Inc.” *Id.*; *see also* Ex. 1036 ¶ 3. Petitioner adds that Homelite Consumer Products, Inc., exercises no control over the daily operations of Petitioner, and Petitioner had no obligation to consult with Homelite or obtain its permission to file the present Petition. RPI Mot. 5 (citing Ex. 1036 ¶ 4).

Moreover, Petitioner acknowledges that parties and individuals involved in proceedings before the Office have a “duty of candor and good faith” in post-grant proceedings before the Board. RPI Mot. 3 (citing 37 C.F.R. § 42.11(a)). Petitioner represents that “there was no intentional concealment, gamesmanship, or bad faith in its decision to identify only ‘One World Technologies, Inc., d/b/a Techtronic Industries Power Equipment’ as the Petitioner.” RPI Mot. 3–4. Given the severe penalties imposed on one who knowingly and willfully falsifies or conceals a material fact (*see* 37 C.F.R. § 11.18(b)(1)), Petitioner’s representation that it did not act in bad faith, or engage in gamesmanship is a probative statement. *See Adello Biologics*, PGR2019-00001, Paper 11 at 5.

With respect to any bad faith or gamesmanship on Petitioner’s part, Patent Owner argues that “Petitioner’s failure to name [the Disputed Entities] as RPIs when it filed its Petition was in bad faith given the circumstances of Petitioner’s omission, or at the very least constitutes gamesmanship.” RPI Opp. 6. Patent Owner argues that Petitioner was

aware of these entities and consciously omitted them as real parties-in-interest, to the benefit of these entities. *Id.*; PO Resp. 49–52. Patent Owner argues that Petitioner’s refusal to allow Patent Owner to attach confidential documents obtained in the parallel litigation to its RPI Opposition evidences Petitioner’s bad faith. PO Resp. 51 (referencing Ex. 2019 ¶¶ 5–12). Patent Owner adds that Petitioner does not take the position that the omission of the Disputed Entities was an error, but instead Petitioner maintains its position that the Disputed Entities are not actually real parties-in-interest. *Id.* Patent Owner concludes that Petitioner’s actions, at best, constitute willful blindness and, at worst, bad faith.

Petitioner responds that Patent Owner’s claims of gamesmanship and bad faith are unsupported. RPI Reply 3. Petitioner adds that, with respect to not allowing use of confidential documents from the litigation, “Patent Owner waited until the afternoon its response was due to inform Petitioner” about the request, and that such a request “violate[d] the district court’s Protective Order,” which specifies that documents covered by the order “cannot be used ‘under any circumstances for any other proceeding’—a prohibition that Patent Owner agreed.” *Id.*

We are not persuaded that Petitioner acted in bad faith or with gamesmanship. Significantly, Patent Owner does not identify any way that Petitioner may benefit from not naming the Disputed Entities as real parties-in-interest, such that Petitioner’s actions could be characterized as in bad faith or in some way as gaming the *inter partes* review system. The fact that Petitioner was aware of these entities is not, in and of itself, sufficient to indicate that Petitioner acted in bad faith or exercised gamesmanship. Also, Petitioner not acknowledging that the parties are actual real parties-in-interest does not evidence bad faith or gamesmanship. *Cf. Proppant,*

Paper 86, 15 (“[W]e see nothing wrong with [the approach of not conceding that a party is a real party-in-interest] as the identification fulfills the key purposes of identifying the real parties in interest.”). Finally, Petitioner’s unwillingness to allow Patent Owner’s eleventh-hour submission of confidential information from the parallel litigation does not evidence bad faith or gamesmanship, given the protective order in the district court litigation.

Also, Patent Owner does not argue that allowing Petitioner to amend its mandatory notices would prejudice Patent Owner. Instead, Patent Owner argues that “[p]ermitting amendments to mandatory disclosures, upon cursory proclamations of good faith ‘effectively nullifies the requirement set forth in [35 U.S.C. §] 315’ . . . , [and] Petitioner must bear the consequence of its omission.” RPI Opposition 7. We do not agree. 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.” Paper 20, 33–34 (quoting the Consolidated Trial Practice Guide 12). As we confirmed in our Institution Decision, the panel is not aware of any conflicts with the Disputed Entities. Paper 20, 34 n.13. And Patent Owner does not argue that the Disputed Entities were left unidentified in order to avoid the statutory estoppel provisions.

Based on these considerations, we conclude that Petitioner should amend its mandatory notices to add Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc. as real parties-in-interest without changing the filing date of the Petition. We, therefore, grant Petitioner’s RPI Motion. Because we grant this motion, we need not determine if Techtronic Industries Co. Ltd.,

Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc. are actually real parties-in-interest.

*B. Patent Owner's Motion to Strike*

Patent Owner moves to strike portions of Petitioner's Reply as "includ[ing] numerous new improper arguments, rationales, and theories." Paper 43, 1.<sup>21</sup> Petitioner opposes. Paper 47. Because, even when considering Petitioner's Reply as a whole, we conclude that Petitioner fails to demonstrate, by a preponderance of the evidence, that any of the Challenged Claims are unpatentable, we dismiss Patent Owner's motion as moot.

*C. Petitioner's Motion to Seal*

Petitioner moves to seal certain portions of the transcript for the deposition of Lee Sowell (Ex. 2029).<sup>22</sup> Mot. Seal 1; Non-Opp. Seal 1. Petitioner provides a redacted version of the deposition transcript (Ex. 1039), in which the portions of the transcript that Petitioner seeks to seal are redacted.

Patent Owner has not filed an opposition to Petitioner's Motion. The time period for opposition has expired.

All papers filed in an *inter partes* review are open and available for access by the public, except that a party seeking to seal a document or thing may file a motion to seal concurrent with the filing of the document or thing

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<sup>21</sup> We authorized Patent Owner's motion. Paper 42.

<sup>22</sup> Patent Owner originally filed a Motion to Seal for the deposition transcript of Petitioner's declarant, Lee Sowell (Ex. 2029). Paper 26, 2. Petitioner filed a Non-Opposition to Patent Owner's Motion to Seal, whereby Petitioner argues Mr. Sowell's deposition transcript should be sealed. Paper 32, 1. We denied Patent Owner's Motion to Seal and authorized Petitioner to file a renewed motion to seal this exhibit. Paper 38, 7.

to be sealed. 35 U.S.C. § 316(a)(1); 37 C.F.R. § 42.14. The document or thing shall be provisionally sealed from receipt of the motion to seal until a decision on the motion. 37 C.F.R. § 42.14.

The moving party has the burden of proof in showing it is entitled to the requested relief. 37 C.F.R. § 42.20(c). The standard for granting a motion to seal is “good cause.” 37 C.F.R. § 42.54. “The ‘good cause’ standard for granting a motion to seal reflects the strong public policy for making all information in an *inter partes* review open to the public.” *Argentum Pharm. LLC v. Alcon Research, Ltd.*, IPR2017-01053, Paper 27 at 3 (PTAB Jan. 19, 2018) (informative).

We appreciate that a party in an *inter partes* review proceeding may file confidential information of the other party. In anticipation of this possibility, we explain in the Scheduling Order (Paper 21) that “[i]t is the responsibility of the party whose confidential information is at issue, not necessarily the proffering party, to file the motion to seal.” Paper 21, 3.

Petitioner argues good cause exists for granting the Motion because the information it seeks to seal is confidential testimony of Petitioner’s Group President, which is governed by the Board’s default Protective Order that we entered on May 13, 2021. Mot. Seal 1; *see also* Paper 38, 7 (ordering entry of the default Protective Order). In particular, Petitioner argues the testimony it seeks to seal regards settlement-type communications under Federal Rule of Evidence 408, internal corporate operations, non-public internal corporate financials, third-party contracts and relationships, and internal personnel and reporting duties. Mot. Seal 5–7.

We have reviewed the information in the redacted portions of Exhibit 1039 that Petitioner seeks to seal, and we find Petitioner has shown sufficiently that it contains confidential information. We also determine that

the redacted version of the deposition transcript allows the public to understand the nature of the testimony. Petitioner has shown good cause for granting its Motion to Seal.

In view of the foregoing, we grant Petitioner's Motion to Seal. The non-redacted version of Mr. Sowell's deposition transcript (Ex. 2029) shall remain under seal.

As set forth in the Consolidated Trial Practice Guide, confidential information that is subject to a protective order ordinarily becomes public forty-five (45) days after final judgment in a trial. CTPG 21–22. There is an expectation that information will be made public where the existence of the information is identified in a final written decision following a trial. *Id.* at 22. After final judgment in a trial, a party may file a motion to expunge confidential information from the record prior to the information becoming public in accordance with 37 C.F.R. § 42.56.

#### *D. Patent Owner's 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” in violation of the Appointments Clause. PO Resp. 52–53. We decline to address Patent Owner's constitutional challenge except to note that the constitutionality of the appointments of the Administrative Patent Judges was addressed by the U.S. Supreme Court in *United States v. Arthrex, Inc.*, 141 S. Ct. 1970, 1986–87, 1997 (2021).

#### IV. CONCLUSION

After considering all the evidence and arguments presently before us on the complete record, we determine Petitioner has not demonstrated, by a

preponderance of the evidence, that any of the Challenged Claims are unpatentable.

In summary:

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>References</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not shown Unpatentable</b>
1, 2, 6, 7, 12	103	Outils, Matsunaga		1, 2, 6, 7, 12
3, 4, 8, 9, 13	103	Outils, Matsunaga, Langdon, Nakano		3, 4, 8, 9, 13
5, 10	103	Outils, Matsunaga, Meldahl		5, 10
11	103	Outils, Matsunaga, Milcoy, Hilchey		11
<b>Overall Outcome</b>				1–13

## V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, claims 1, 2, 6, 7, and 12 *are not shown to be unpatentable* under 35 U.S.C. § 103 over Outils and Matsunaga;

FURTHER ORDERED that, claims 3, 4, 8, 9, and 13 *are not shown to be unpatentable* under 35 U.S.C. § 103 over Outils, Matsunaga, Langdon, and Nakano;

FURTHER ORDERED that, claims 5 and 10 *are not shown to be unpatentable* under 35 U.S.C. § 103 over Outils, Matsunaga, and Meldahl;

FURTHER ORDERED that, claim 11 *is not shown to be unpatentable* under 35 U.S.C. § 103 over Outils, Matsunaga, Milcoy, and Hilchey;

FURTHER ORDERED that Petitioner's Motion to Amend its Mandatory Notices to add real parties-in-interest without changing the filing date of the Petition is *granted*;

FURTHER ORDERED that Patent Owner's Motion to Strike is *dismissed* as moot;

FURTHER ORDERED that Patent Owner's Motion to Seal is *granted* and that the non-redacted version of Mr. Sowell's deposition transcript (Ex. 2029) remain under seal in the Board's filing system at least until forty-five (45) days after final judgment in the proceeding; and

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

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