

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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IPR2020-00888  
Patent 10,070,588 B2

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

FINAMORE, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision  
Determining No Challenged Claims Unpatentable  
*35 U.S.C. § 318(a)*

ORDER

Granting Petitioner's Motion to Update Mandatory Notice to Add Real  
Parties-In-Interest  
*37 C.F.R. § 42.8*  
Granting Petitioner's Motion to Seal  
*37 C.F.R. § 42.14*  
Dismissing Patent Owner's Motion to Strike  
*37 C.F.R. § 42.23(b)*

## I. INTRODUCTION

One World Technologies, Inc., doing business as Techtronic Industries Power Equipment (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–12, 15–17, and 19–21 of U.S. Patent No. 10,070,588 B2 (“the ’588 patent”) (Ex. 1001). Pet. 1. Chervon (HK) Limited (“Patent Owner”) filed a Preliminary Response (Paper 11).

Subsequent to Patent Owner’s Preliminary Response, Petitioner filed a Motion to Update Mandatory Notice to Add Real Parties-In-Interest (Paper 13, “Mot. RPI”). Patent Owner filed an Opposition (Paper 16, “Opp. RPI”), and Petitioner filed a Reply (Paper 18, “Reply RPI”).

On November 6, 2020, we issued a Decision (Paper 20, “Dec.”) granting institution of *inter partes* review. In the Decision, we did not decide Petitioner’s Motion to Update Mandatory Notice to Add Real Parties-In-Interest. Dec. 3 n.1, 71–72.

During the trial, Patent Owner filed a Response (Paper 25, “PO Resp.”). Petitioner filed a Reply (Paper 38, “Reply”), and Patent Owner filed a Sur-reply (Paper 43, “Sur-reply”). Oral argument took place on August 5, 2021, and the record includes the transcript (Paper 52, “Tr.”).

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 37, 7. Petitioner filed its Motion to Seal (Paper 28, “Mot. Seal”), which Patent Owner does not oppose.

Patent Owner filed a Motion to Strike (Paper 42, “Mot. Strike”). Petitioner filed an Opposition (Paper 46, “Opp. Strike”).

This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a). For the reasons that follow, we conclude Petitioner has not proven by a preponderance of the evidence that claims 1–12, 15–17, and 19–21 are unpatentable.

## II. BACKGROUND

### *A. Real Parties in Interest*

Petitioner identifies itself, Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc., as real parties in interest.<sup>1</sup> Pet. 1; Mot. RPI 1. Patent Owner identifies itself and Chervon North America Inc. as real parties in interest. Paper 5, 1.

### *B. Related Matters*

Petitioner and Patent Owner identify the following civil action as a related matter: *Chervon (HK) Ltd. v. One World Technologies, Inc.*, No. 1:19-cv-01293-LPS (D. Del. filed July 11, 2019). Pet. 1; Paper 5, 1. The following eight Board proceedings are also related matters:

- (1) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
IPR2020-00883 (PTAB denied institution Nov. 6, 2020)  
(challenging U.S. Patent No. 9,060,463 B2),

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<sup>1</sup> In the Petition, Petitioner identifies itself as a real party in interest (Pet. 1), and in its Motion to Update Mandatory Notice to Add Real Parties-In-Interest, Petitioner seeks to add Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc., as real parties in interest (Mot. RPI 1). For the reasons set forth in section III.I, we grant Petitioner’s Motion.

- (2) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
IPR2020-00884 (PTAB granted institution Nov. 6, 2020)  
(challenging U.S. Patent No. 9,596,806 B2),
- (3) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
IPR2020-00885 (PTAB denied institution Nov. 6, 2020)  
(challenging U.S. Patent No. 9,648,805 B2),
- (4) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
IPR2020-00886 (PTAB granted institution Nov. 6, 2020)  
(challenging U.S. Patent No. 9,826,686 B2),
- (5) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
IPR2020-00887 (PTAB granted institution Nov. 6, 2020)  
(challenging U.S. Patent No. 9,986,686 B2),
- (6) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
PGR2020-00059 (PTAB denied institution Dec. 7, 2020)  
(challenging U.S. Patent No. 10,477,772 B2),
- (7) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
PGR2020-00060 (PTAB denied institution Dec. 7, 2020)  
(challenging U.S. Patent No. 10,485,176 B2), and
- (8) *One World Technologies, Inc. v. Chervon (HK) Ltd.*,  
PGR2020-00061 (PTAB denied institution Dec. 7, 2020)  
(challenging U.S. Patent No. 10,524,420 B2).

Pet. 1; Paper 5, 1.

### *C. The '588 Patent*

The '588 patent, titled "GARDENING TOOL," issued on September 11, 2018, from an application filed on August 29, 2016.

Ex. 1001, codes (54), (45), (22). The '588 patent claims priority as a continuation to U.S. Patent No. 9,596,806 B2, which has an October 10, 2014, filing date. *Id.* at code (63). The '588 patent also claims priority to a Chinese patent application filed April 24, 2014, and an earlier Chinese patent application filed October 10, 2013. *Id.* at code (30).

The '588 patent “relates generally to gardening tools, and more particularly to mowers.” *Id.* at 1:16–17. According to the '588 patent, a gardening tool, such as a mower, includes a handle that folds or rotates for convenience. *Id.* at 1:30–32. When the handle is folded or rotated, however, a user can get close to the main body. *Id.* at 1:32–36. If the user unintentionally starts the mower when the user is close to the main body, the user can be in danger. *Id.*

An exemplary garden tool, mower 100, is shown in Figure 1, reproduced below.

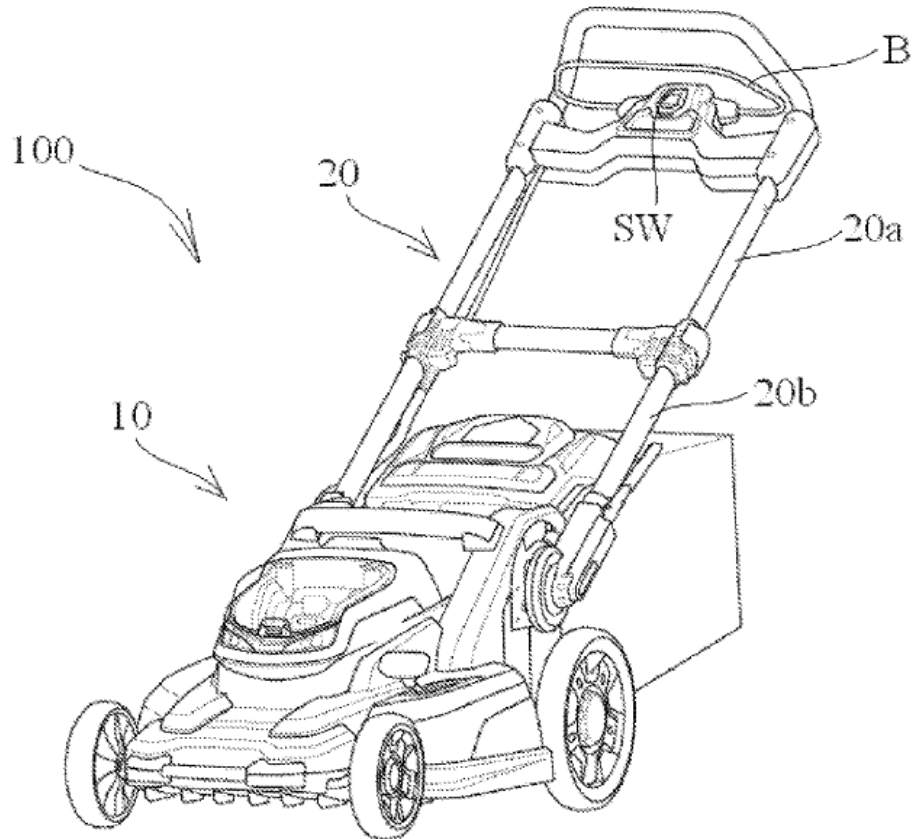


FIG.1

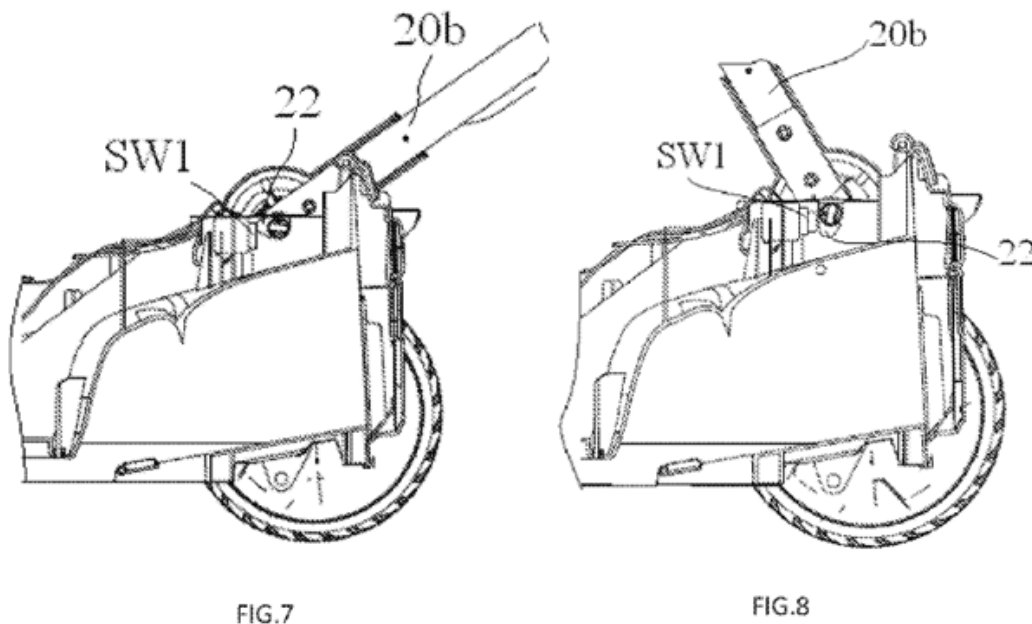
Figure 1 is a schematic view of mower 100. *Id.* at 2:6–7, 2:38–40.

Mower 100 comprises main body 10 having a motor that drives a functional accessory, namely a mowing blade. *Id.* at 2:41–42, 2:46–51. Mower 100 further comprises handle 20 rotatably connected to main body 10. *Id.* at 2:41–43. Handle 20 includes an operation assembly with trigger B. *Id.* at 2:58–63. By operating trigger B, a user can control mower 100 to start or stop the motor. *Id.* at 2:63–65. Handle 20 also includes two telescopic tubes 20a, 20b, and telescopic tube 20a is inserted into telescopic tube 20b to form a slidable connection. *Id.* at 3:1–5.

A control system is used to ensure safety when a user is using mower 100 by locking the motor so that the motor is not controlled by the operation assembly. *Id.* at 5:26–31. The control system comprises at least two control devices. *Id.* at 5:45–48. One control device controls the motor only when all of the remaining control devices are in a designated state. *Id.*

A user controls a first control device via the operation assembly to start the motor, and the first control device can be locked by any other control device. *Id.* at 5:60–67. The first control device comprises a first switch, a first signal source device, or a combination thereof. *Id.* at 6:1–2. First switch SW, which is shown in Figure 1, is controlled by trigger B and connected in series in a power supply circuit of the motor. *Id.* at 6:3–17, 6:32–34.

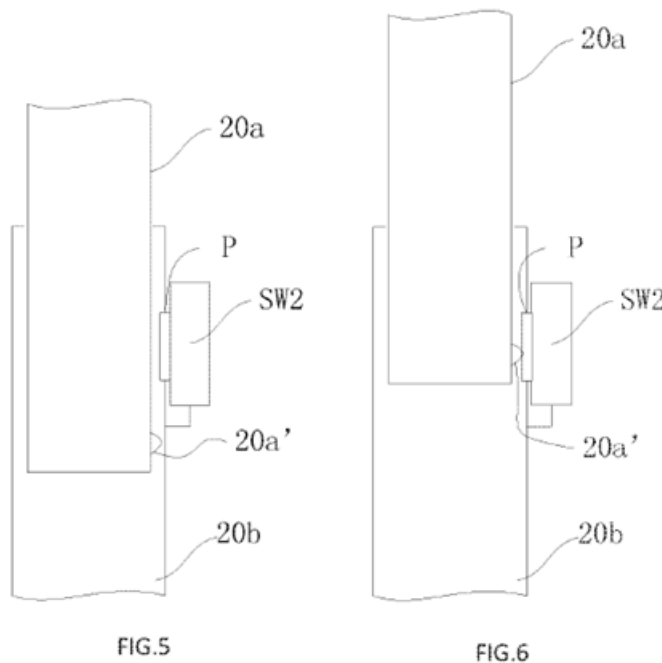
A second control device is shown in Figures 7 and 8, reproduced below.



Figures 7 and 8 are schematic views showing the handle rotated to a designated position and not rotated to a designated position, respectively.

*Id.* at 2:18–21. The second control device comprises a second switch connected in the power supply circuit, a second signal source device that sends a signal to the power supply circuit, or a combination thereof. *Id.* at 6:50–54. As shown in Figures 7 and 8, second switch SW1 is secured to main body 10. *Id.* at 6:61–63. As handle 20 rotates to a designated state, trigger 22 triggers second switch SW1. *Id.* at 6:66–7:3.

A third control device is shown in Figures 5 and 6, reproduced below.



Figures 5 and 6 are schematic views illustrating the telescopic tube not extended to a designated state and extended to a designated state, respectively. *Id.* at 2:13–17. The third control device comprises a third switch connected in the power supply circuit or a third signal source device that sends a signal to the power supply circuit. *Id.* at 7:30–34. As shown in Figures 5 and 6, third switch SW2 is disposed at an end of telescopic tube 20b, and trigger member 20a' is disposed at the bottom of telescopic tube 20a. *Id.* at 7:39–42, 7:45–47. When telescopic tube 20a is drawn out of telescopic

tube 20*b* so that handle 20 is in an extended state, trigger member 20*a*' triggers contact P of third switch SW2. *Id.* at 7:47–51.

The '588 patent further describes that first switch SW, second switch SW1, and third switch SW2 are all connected in series on the same line of the power supply circuit. *Id.* at 7:52–54.

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 7:54–60.

#### *D. Challenged Claims*

Petitioner challenges claims 1–12, 15–17, and 19–21 of the '588 patent. Pet. 1. Claims 1, 11, and 15 are independent. Ex. 1001, 8:19–36, 9:35–63, 10:22–53. Independent claims 1 and 11 are illustrative and reproduced below, adding Petitioner's labels for the limitations.

1. [1P] A mower, comprising:

[1a] a main body including a motor for driving a mowing blade to rotate;

[1b] an operation assembly for being operated by a user to activate the motor;

[1c] a handle rotatably connected to the main body and including a plurality of telescopic members slidably connected to each other; and

[1d] a control device for sending a control signal to cause the motor to be activated by the operation assembly when one of the plurality of telescopic members is caused to be moved to a predetermined position relative to another one of the plurality of telescopic members or to prevent the motor from being activate by the operation assembly when the one of the plurality of telescopic members is caused to

be moved away from the predetermined position relative to the another one of the plurality of telescopic members.

11. [11P] A gardening tool, comprising:

[11a] a main body at least having a functional accessory and a motor for driving the functional accessory;

[11b] a handle 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 relative to the main body, the handle being rotatable relative to the main body around a pivot axis;

[11c] an electric power source and a power supply circuit enabling the electric power source to provide power to the motor; and

[11d] 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:

[11e] a first control device configured to be controlled by the operation assembly and [11f] a second control device disposed at a position proximate to the pivot axis and configured to be controlled according to the rotating position of the handle wherein, when the handle rotates to the predetermined position relative to the main body, the control system allows starting of the motor and, when the handle rotates to a position other than the predetermined position relative to the main body, the control system is not allowed to start the motor and [11g] wherein the second control device comprises a signal source device for sending a control signal to the power supply circuit.

*Id.* at 8:19–36, 9:35–63. Independent claim 15 recites a mower similar to the gardening tool recited in independent claim 11. *Id.* at 10:22–53.

Independent claims 11 and 15 recite a first control device configured to be controlled by the operation assembly and a second control device configured to be controlled based on the rotating position of the handle, whereas

independent claim 1 recites a control device that activates or prevents activation of the motor based on the position of telescopic members relative to each other.

Claims 2–10 depend from independent claim 1. *Id.* at 8:37–9:34.  
Claim 12 depends from independent claim 11. *Id.* at 9:64–10:12.  
Claims 16, 17, and 19–21 depend from independent claim 15. *Id.*  
at 10:54–11:12, 11:17–25.

*E. Asserted Grounds and Evidence*

Petitioner asserts the following four grounds of unpatentability for claims 1–12, 15–17, and 19–21 of the ’588 patent:

<b>Claim(s) Challenged</b>	<b>35 U.S.C. §<sup>2</sup></b>	<b>References</b>
1–10	103	Reichart <sup>3</sup> , Nakano <sup>4</sup>
11, 15, 20	103	Outils <sup>5</sup> , Matsunaga <sup>6</sup>
12, 16, 17, 21	103	Outils, Matsunaga, Langdon <sup>7</sup> , Nakano
19	103	Outils, Matsunaga, Milcoy <sup>8</sup> , Hilchey <sup>9</sup>

Pet. 4. In support of its arguments, Petitioner submits a Declaration of E. Smith Reed (Ex. 1003). Patent Owner deposed and cross-examined Mr. Reed and submits a transcript of Mr. Reed’s deposition (Ex. 2028).

Patent Owner relies on a Declaration of Fred P. Smith (Ex. 2027). Petitioner deposed and cross-examined Mr. Smith and submits a transcript of Mr. Smith’s deposition (Ex. 1040).

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<sup>2</sup> The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended certain sections of this statute, including sections 102 and 103, and the effective date of the relevant amendment is March 16, 2013. Petitioner applies the AIA version of the statute (Pet. 4–5), and the applicability of the AIA version is undisputed.

<sup>3</sup> Reichart, GB 2,386,813 A, published Oct. 1, 2003 (“Reichart”) (Ex. 1007).

<sup>4</sup> Nakano et al., WO 2013/122266 A2, published Aug. 22, 2013 (“Nakano”) (Ex. 1015).

<sup>5</sup> Certified English translation of FR 2,768,300 A1, published Mar. 19, 1999 (“Outils”) (Ex. 1014).

<sup>6</sup> Matsunaga et al., US 8,098,036 B2, issued Jan. 17, 2012 (“Matsunaga”) (Ex. 1006).

<sup>7</sup> Langdon, US 5,209,051, issued May 11, 1993 (“Langdon”) (Ex. 1012).

<sup>8</sup> Milcoy, US 3,823,291, issued July 9, 1974 (“Milcoy”) (Ex. 1016).

<sup>9</sup> Hilchey et al., US 4,476,643, issued Oct. 16, 1984 (“Hilchey”) (Ex. 1017).

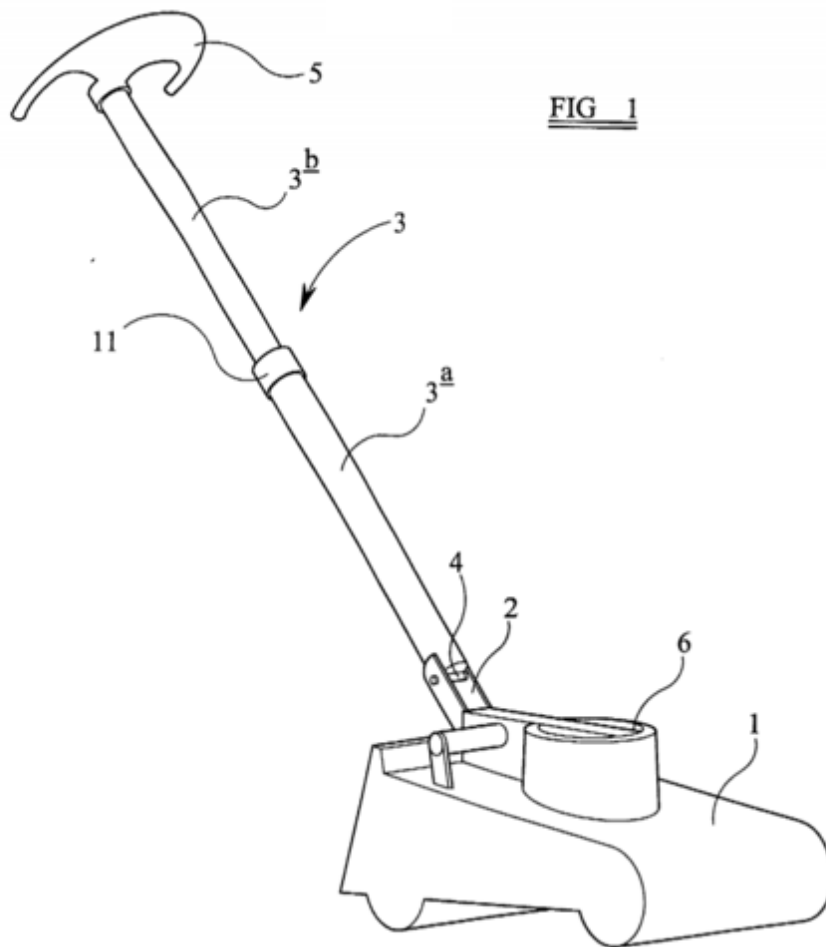
*F. Overview of the References*

Petitioner's asserted grounds of unpatentability are based on Reichart, Nakano, Outils, Matsunaga, Langdon, Milcoy, and Hilchey. We give an overview of each of these references below.

*1. Reichart*

Reichart relates to “a ground working machine, particularly a lawnmower having a handle arranged in [a] spaced manner from a machine casing on a linkage and whose position relative to the casing is variable.”

Ex. 1007, 1:3–5. Reichart's lawnmower is shown in Figures 1 and 2, reproduced below.



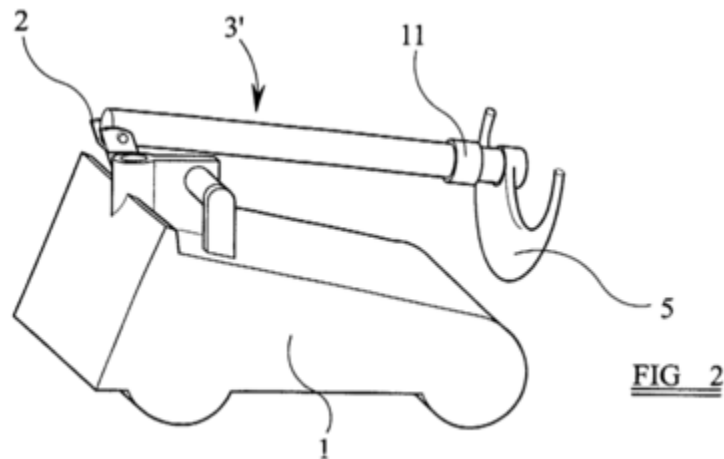


Figure 1 shows an arrangement of a telescopic steering column, i.e., handle, on a lawnmower casing, and Figure 2 shows the arrangement with the telescopic handle reduced to its minimum dimensions when out of operation. *Id.* at 3:20–25. The lawnmower includes casing 1, engine cowling 6, and telescopic tube 3 comprising lower part 3a and upper part 3b. *Id.* at 4:1–5, 5:7–12, Figs. 1, 2. Handle 5 is positioned on upper part 3b, which is received in lower part 3a. *Id.* at 4:22–26, 5:7–12, Figs. 1, 2. Lower part 3a is pivotally attached to tongue 2 of casing 1 by threaded bolt 4. *Id.* at 4:1–5. The pivotability of telescopic tube 3 makes it possible to pivot from the use position shown in Figure 1 to the non-use position shown in Figure 2. *Id.* at 4:8–10.

It is also possible to adapt the height of handle 5 to a user while simultaneously ensuring a length that provides the necessary stepping freedom, as depicted in Figure 3, reproduced below.

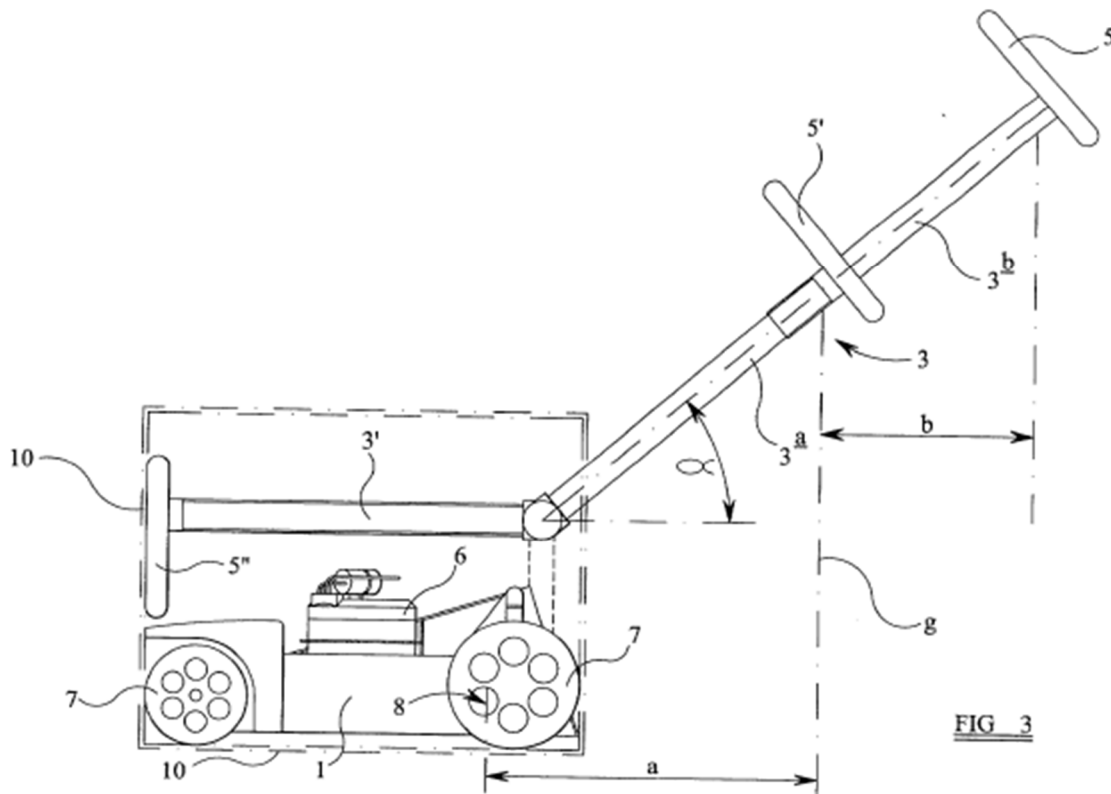


Figure 3 is a side view of the lawnmower with representations of different handle and linkage positions. *Id.* at 3:27–28. Minimum spacing “a” between blade circular path 8 must exist when a relatively short user uses the lawnmower with telescopic tube 3 at its minimum length, i.e., the length of lower part 3a, at handle position 5'. *Id.* at 4:31–5:5. If a taller user operates the lawnmower, telescopic tube 3 can be extended to its full length, i.e., the collective length of lower part 3a and upper part 3b, at handle position 5, which has the same angular arrangement but greater height than handle position 5'. *Id.* at 5:7–12. In handle position 5, the spacing of the handle relative to blade circular path 8 is greater than minimum spacing “a” by an amount b. *Id.* at 5:12–15. As a result, the taller user’s stride is not impaired, and the taller user can more ergonomically and effectively push the lawnmower. *Id.* at 5:15–18.

As shown in Figure 2, when telescopic tube 3 is telescoped to its shortest length, telescopic tube 3 can be pivoted counterclockwise by an angle of 180° to position 3' and handle position 5". *Id.* at 6:1–5. In this position, telescopic tube 3 is no longer than casing 1 so that the handle is still within machine contour 10, providing a limited space requirement in the non-use position. *Id.* at 6:5–11.

Telescopic tube 3 houses a spiral cable that passes from handle 5 and the operating elements located thereon to the engine. *Id.* at 6:13–15. The spiral cable accommodates the length changes of telescopic tube 3. *Id.* at 6:15–17.

2. *Nakano*

Nakano relates to “an electric working machine driven by a motor,” such as a bush cutter. Ex. 1015, 1.<sup>10</sup> According to Nakano, an object of the disclosed invention is to provide

an electric working machine in which a detection unit for detecting an extended or retracted state of a rod is provided, and if retraction of a rod by a certain cause is detected while a work is performed in an extended state of the rod, a motor is immediately braked, thereby improving a safety thereof.

*Id.* at 3–4. Nakano’s bush cutter is shown in Figures 1 and 2, reproduced below.

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<sup>10</sup> Nakano does not include paragraph or line numbering. Our citations to Exhibit 1015 refer to the pagination of the publication itself, not Petitioner’s pagination for the exhibit.

FIG. 1

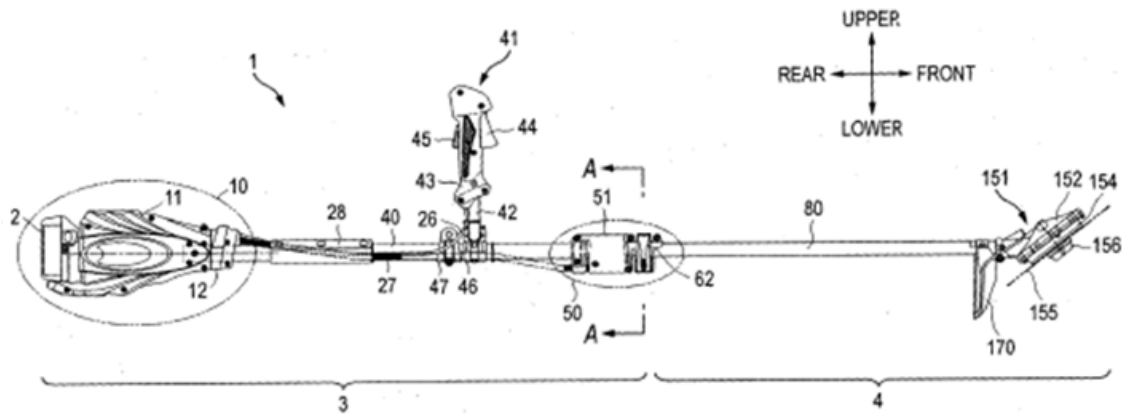


FIG. 2

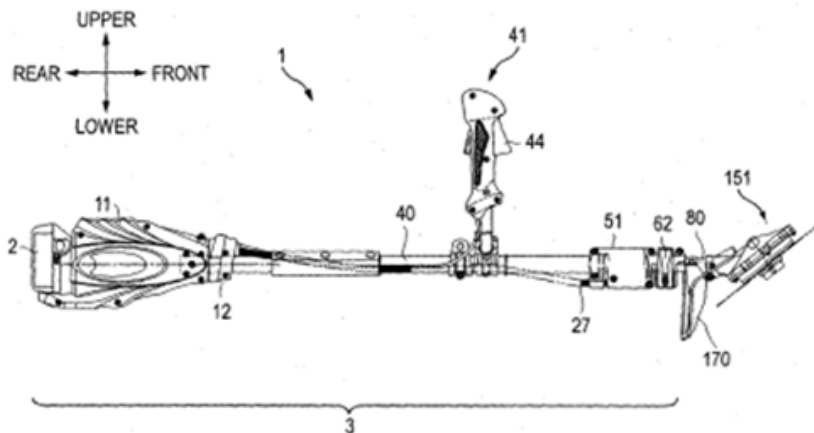


Figure 1 is a side view of an electric bush cutter in which a rod is in an extended state, and Figure 2 is a side view of the electric bush cutter with the rod in a retracted state. *Id.* at 5–6. Electric bush cutter 1 includes operation unit 10 with battery pack 2 attached thereto, a contracting rod fixed to a front end of operation unit 10, driving unit 151 attached to an end portion of the rod, and handle unit 41 located near the center of the rod. *Id.* at 7. The contracting rod comprises fixed pipe 40 and movable pipe 80 adapted to move relative to fixed pipe 40. *Id.* Handle unit 41 includes trigger lever 44,

which is connected via wire 26 to switch 21 in operation unit 10. *Id.* at 8. Operation unit 10 includes a control unit for driving a motor incorporated in driving unit 151 and a boosting circuit for boosting and supplying a DC voltage from battery pack 2 to the motor. *Id.*

The position of movable pipe 80 is fixed relative to fixed pipe 40 with holder 51 of connection section 50. *Id.* at 9, 10. Holder 51 is shown in Figure 4, reproduced below.

FIG. 4

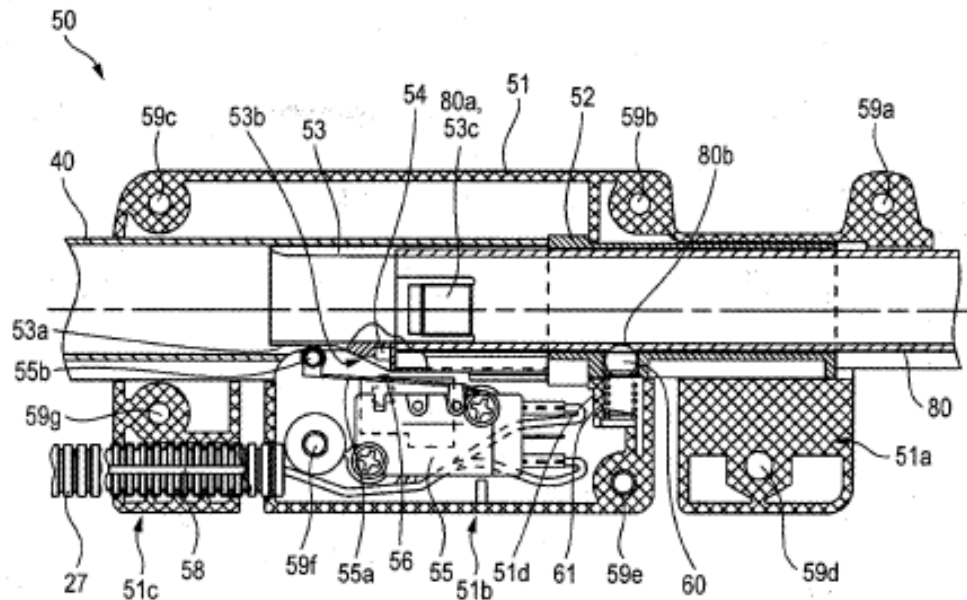


Figure 4 is a sectional view of connection section 50, which includes holder 51. *Id.* at 6, 10. Holder 51 is provided with an extending detection unit so that driving unit 151 does not operate when movable pipe 80 is not fully extended. *Id.* at 9. One extending detection unit is mechanical switch 55. *Id.* at 18. When movable pipe 80 retracts toward fixed pipe 40, inclined surface 53b of sleeve 53 on movable pipe 80 guides pulley 55b

downwardly so that lever 55a releases a plunger of switch 55 to turn the switch off. *Id.* at 18–19.

Another extending detection unit is Hall IC 56 and magnet 54 provided on sleeve 53 of movable pipe 80. *Id.* at 19. Hall IC 56 is configured to output a Low state when magnet 54 is close to it and a High state when magnet 54 is spaced away from it. *Id.* When movable pipe 80 retracts toward fixed pipe 40, magnet 54 is close to Hall IC 56, resulting in a Low state that, along with the signal of switch 55, is transferred to circuit board 13. *Id.*

Figure 7, reproduced below, shows a circuit diagram for the electric bush cutter.

FIG. 7

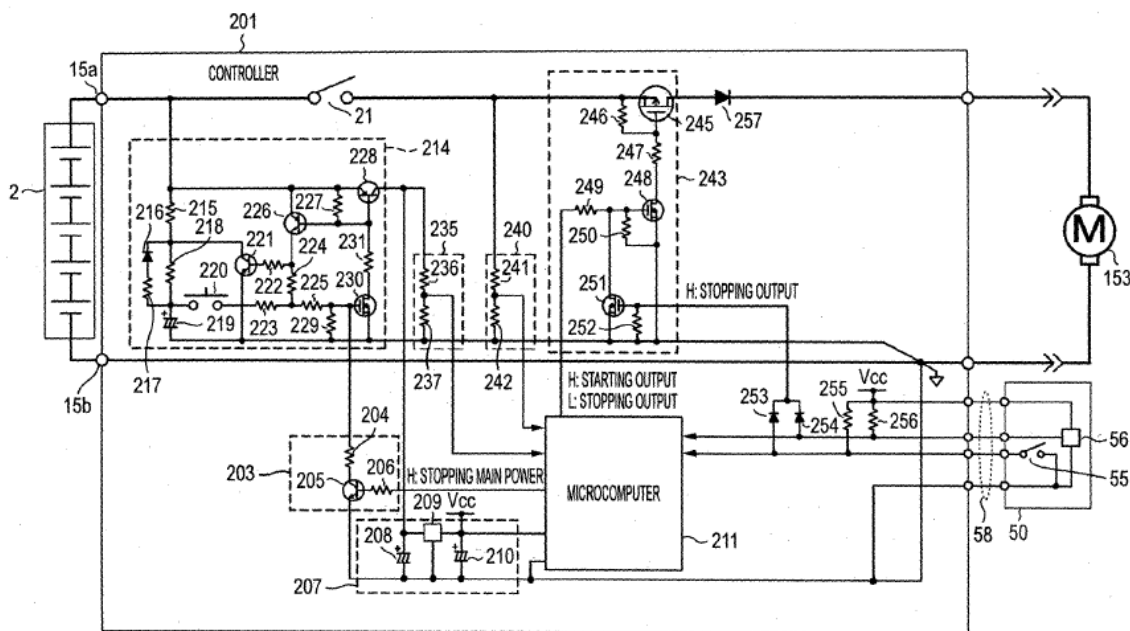


Figure 7 is a circuit diagram for electric bush cutter 1. *Id.* at 6. Controller 201 is configured to receive electric power from battery pack 2 and rotate motor 153. *Id.* at 22. Controller 201 includes switch 21,

microcomputer 211, and various circuits, including output stop circuit 243.

*Id.* Output stop circuit 243 forcibly stops rotation of motor 153 under the control of microcomputer 211 even when switch 21 is turned on. *Id.* at 24.

When a certain situation occurs during rotation of motor 153, such as movable pipe 80 not being extended from fixed pipe 40, microcomputer 211 can output a signal to output stop circuit 243 to stop motor 153. *Id.*

at 25–26.

### 3. *Outils*

Outils relates to “lawnmowers . . . and concerns a mower that includes a safety device preventing access to the rotating cutting blade.” Ex. 1014, 2:3–6. A lawnmower having a safety device is shown in Figure 1, reproduced below.

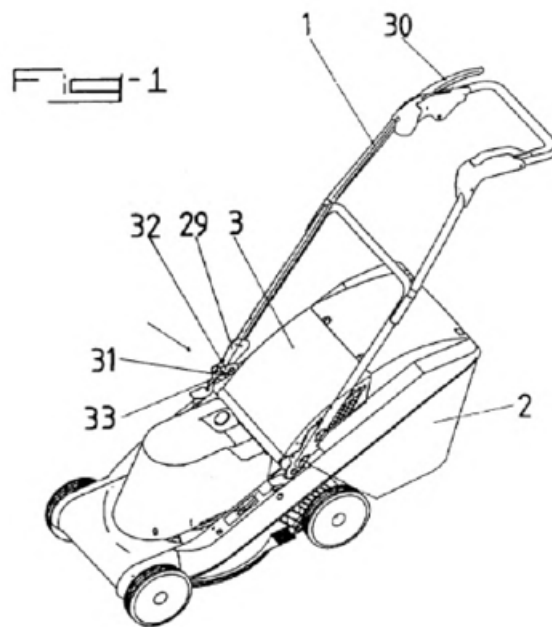


Figure 1 is a perspective view of a mower equipped with a safety device in an operating position. *Id.* at 3:5–6. The lawnmower includes handlebar 1; cut-grass receiving receptacle 2; and a safety device comprising cover 3, which is hinged to the mower and connectable to handlebar 1, and means 28

for controlling the activation or rotation of the cutting blade. *Id.* at 3:25–26, 3:35–4:3. Means 28 includes remote control cable 29, which acts on a motor brake, a brake coupling, or an electrical supply contactor, and hold-to-run control component 30 on handlebar 1 for actuating remote control cable 29. *Id.* at 4:5–8.

The lawnmower can include cutting blade activation means 4 that stops the motor and/or decouples and brakes the cutting blade if handlebar 1 is tilted forward. *Id.* at 8:22–29. Figure 10, reproduced below, shows the lawnmower with cutting blade activation means.

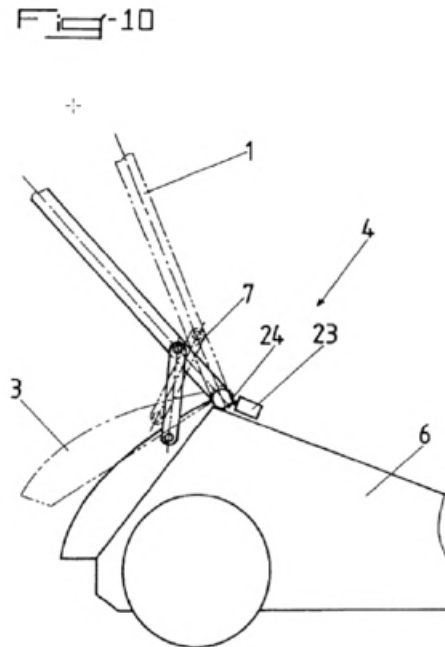


Figure 10 is a partial schematic view showing an embodiment of the cutting blade activation means. *Id.* at 3:22–23. In this embodiment, cutting blade activation means 4 comprises an electrical, electromechanical, or mechanical activation actuator 23 that interacts with cam 24 on handlebar 1. *Id.* at 8:22–25. Cam 24 acts upon activation actuator 23 as soon as handlebar 1 is tilted forward such that activation actuator 23 stops the motor and/or

decouples and brakes the cutting blade. *Id.* at 8:25–29. Activation actuator 23 is similar to activation actuator 20, which is an electrical supply cut-off switch, in that both are preferably of the all-or-nothing type that allows the controlled element to be restarted only after the actuator is interlocked again as a result of the control component returning to the in-use position. *Id.* at 7:25–26, 9:10–13.

4. *Matsunaga*

Matsunaga “relates to an electric power tool operated by a motor,” such as a grass mower. Ex. 1006, 1:5–6, 4:53–55. A rechargeable grass mower is shown in Figure 1, reproduced below.

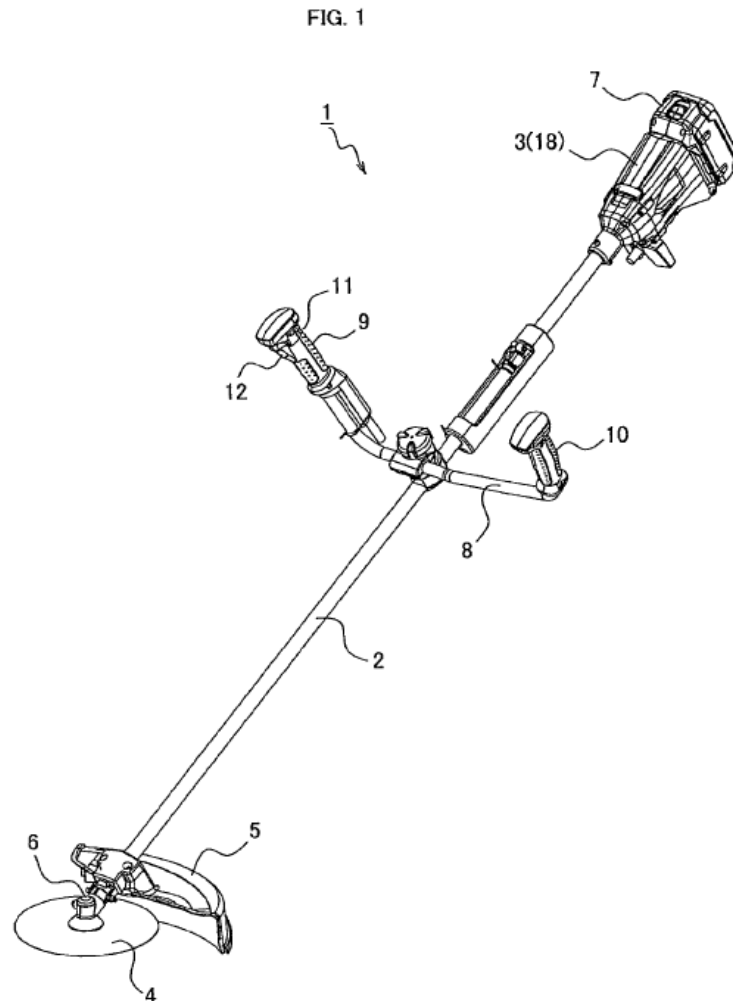


Figure 1 is a perspective view showing the overall appearance of a rechargeable grass mower. *Id.* at 6:6–7. Rechargeable grass mower 1 comprises bar-like main pipe 2, motor unit 3 and battery 7 provided on an upper end side of main pipe 2, and rotatable mowing blade 4 provided on a lower side of main pipe 2. *Id.* at 6:34–39. Motor unit 3 houses motor 18 for driving mowing blade 4, and control circuit 13 controls the application of current to motor 18. *Id.* at 6:40–44. Substantially U-shaped handle 8 is located in a vicinity of an intermediate position along the length of main pipe 2. *Id.* at 6:58–60. Right hand grip 9 is provided on one side of handle 8, and left hand grip 10 is provided on the other side. *Id.* at 6:60–63. Right hand grip 9 includes contact lock-off switch 11 and trigger switch 12. *Id.* at 6:64–66.

An electrical circuit diagram for the rechargeable grass mower is shown in Figure 2, reproduced below.

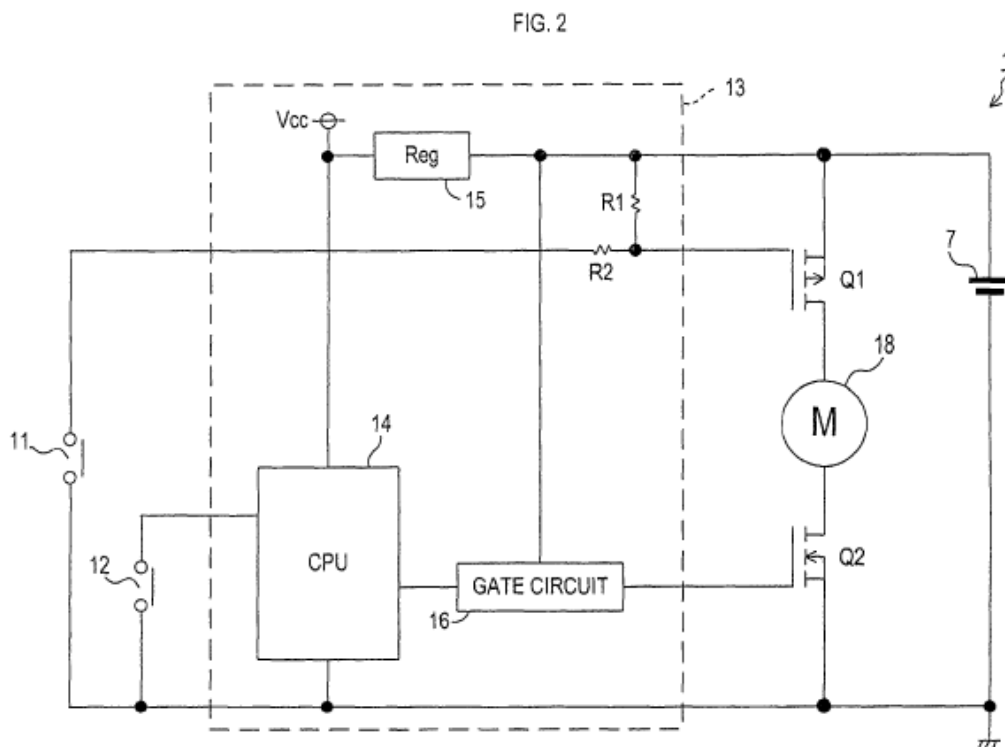
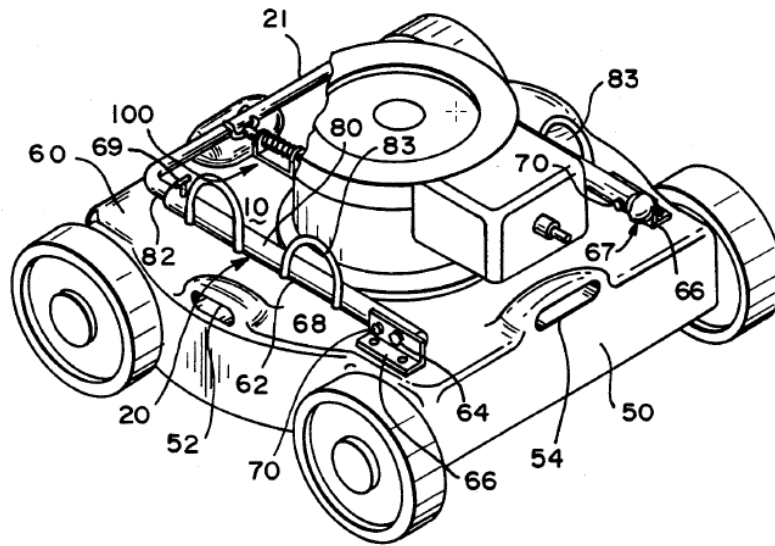


Figure 2 is an electrical circuit diagram for a rechargeable grass mower. *Id.* at 6:8–10. As shown in Figure 2, rechargeable grass mower 1 includes first semiconductor switch Q1 and second semiconductor switch Q2 that are connected in series on a current path from battery 7 to motor 18. *Id.* at 7:39–43. First semiconductor switch Q1 is turned on or off in accordance with an operating state of lock-off switch 11, and second semiconductor switch Q2 is turned on or off, via CPU 14, in accordance with an operating state of trigger switch 12. *Id.* at 7:63–65, 8:24–26. First semiconductor switch Q1 and second semiconductor switch Q2 are used as switches that directly interrupt the current path to motor 18. *Id.* at 9:56–58.

In view of first semiconductor switch Q1 and second semiconductor switch Q2, a high current does not flow into lock-off switch 11 and trigger switch 12 that are directly operated by a user, and a contact switch having small contact capacity can be adopted as lock-off switch 11 and trigger switch 12. *Id.* at 9:58–62. Moreover, wiring lines from lock-off switch 11 and trigger switch 12 to motor unit 3 can be thin and light. *Id.* at 9:62–64.

5. *Langdon*

Langdon relates to “lawn mowers and, more particularly, to rotary lawn mowers including a lift handle assembly affixed to the mower deck.” Ex. 1012, 1:13–15. An embodiment of Langdon’s lawn mower is shown in Figure 5, reproduced below.



**FIG. 5**

Figure 5 is a perspective view of an embodiment wherein the push handles fold over the mower and are latched to the forward deck. *Id.* at 1:62–64. Push handles 20 include lower tubular portion 62 and tubular portion 82, which is telescoped upwardly and inwardly into tubular member 62. *Id.* at 4:1–15. “[T]he 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. Locking means 69, such as a spring biased pin, locks the handles in an extended, operating push position. *Id.* at 4:6–8.

6. *Milcoy*

Milcoy “relates to an electric switch which is particularly suitable for controlling the operation of a portable electric appliance,” for example, lawn mowers. Ex. 1016, 1:4–12. Milcoy’s switch aims to control a lawn mower such that the lawn mower may not be powered on while the user is exposed

to dangers from the lawn mower, such as when making adjustments. *Id.* at 1:14–39.

Figure 1, reproduced below, shows Milcoy's switch incorporated into a handle of a lawn mower.

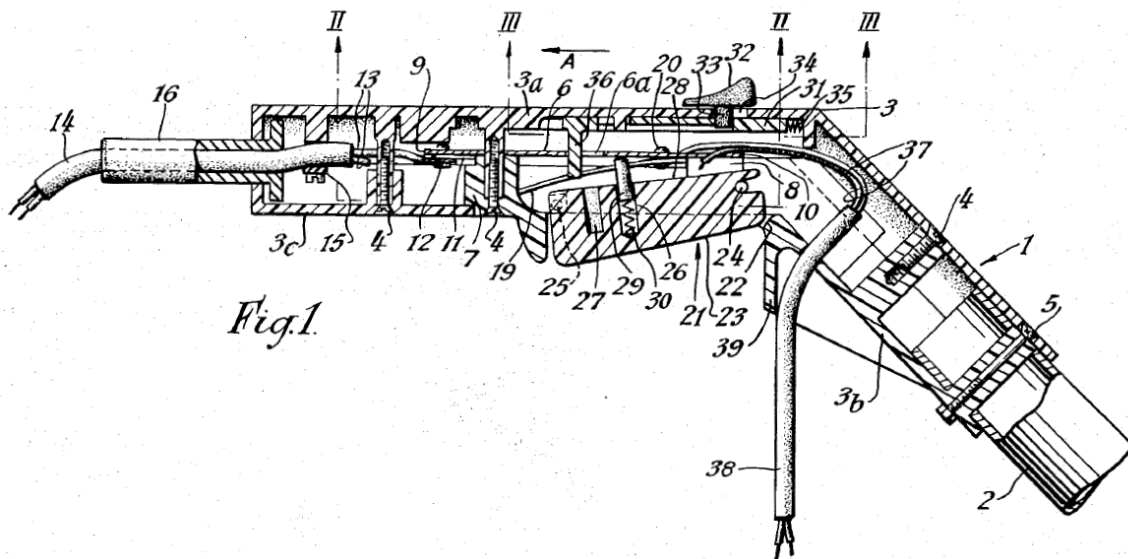


Figure 1 is a cross-sectional view of part of the handle of a lawn mower incorporating the switch. *Id.* at 2:54–55. Contact actuating member (or trigger) 21 pivots against a biasing force (spring 30) to close a contact switch. *Id.* at 1:56–2:6, 3:35–63. The switch includes contact buttons 17 and 18, which are biased apart, and trigger 21 overcomes this bias to close the contact. *Id.* at 1:56–2:6, 3:14–33.

#### 7. Hilchey

Hilchey “relates to a hand control system for a motorized implement such as a snowblower, tiller or lawn mower.” Ex. 1017, 1:5–12. Hilchey’s hand control system is shown in Figures 1 and 2, reproduced below.

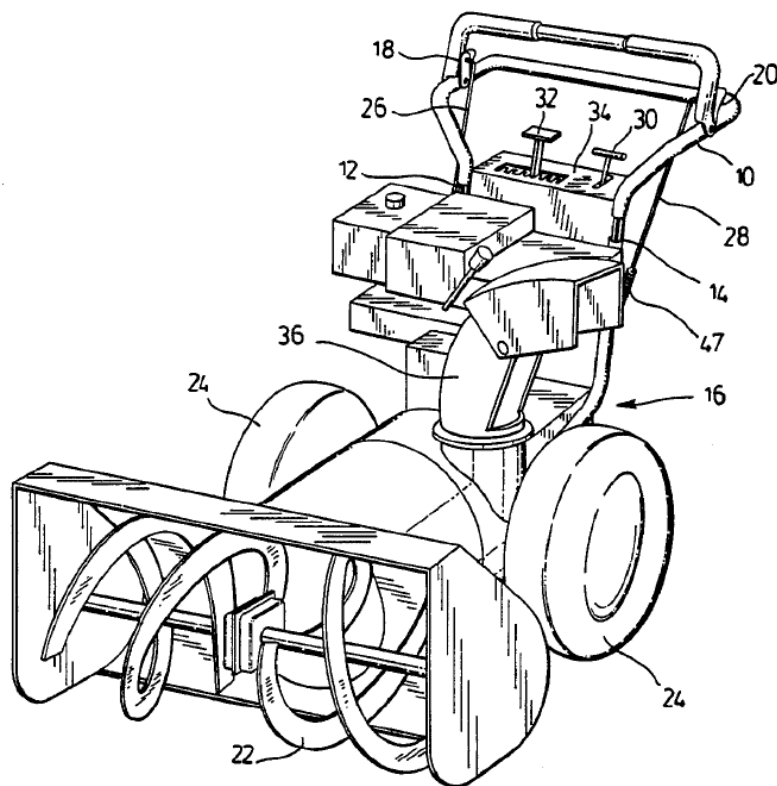


FIG. 1.

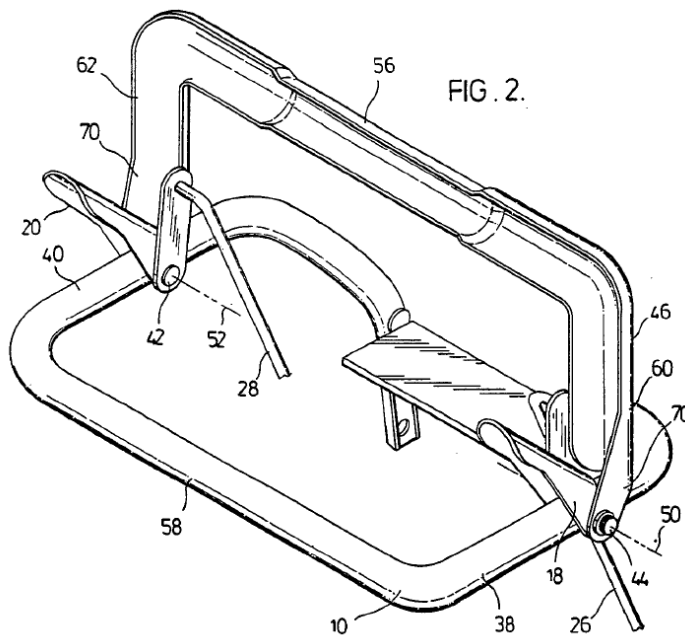


FIG. 2.

Figure 1 is a perspective view of a snowblower with the hand control system mounted thereon, and Figure 2 is a perspective view of the hand control system shown on the snowblower in Figure 1. *Id.* at 2:31–34, 2:41–46. The hand control system includes “a generally U-shaped, horizontally-disposed, tubular handle 10 having side extensions 12, 14.” *Id.* at 2:43–44. Control levers 18, 20, pivotally mounted to handle 10 on either side of the control system, control the working tool, such as auger 22 of the snowblower shown in Figure 1, and drive wheels 24. *Id.* at 2:53–54, 2:60–62. Levers 18, 20 are biased to an at-rest, inoperative, position by tension springs 47. *Id.* at 3:13–19.

Bail 46 accommodates levers 18, 20, which are curved in cross-section to envelop side portions 38, 40 of handle 10. *Id.* at 3:1–6. Bail 46 is biased to an at-rest, inoperative position by springs 72. *Id.* at 3:19–21. “The operator can thus depress both levers 18, 20 at the same time with one hand, by holding the bail 46 against the handle 10, and the operator will have a free hand to” operate other controls. *Id.* at 3:53–57.

### III. ANALYSIS

#### A. *Mr. Smith’s Testimony*

Petitioner argues we should give Mr. Smith’s opinions little or no weight. Reply 1–5. Petitioner contends that Mr. Smith has negligible design experience with mowers or gardening tools (*id.* at 1–3), and that Mr. Smith has no experience with the safety regulations and ANSI<sup>11</sup> standards referenced in this proceeding (*id.* at 3–4). Petitioner also contends

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<sup>11</sup> American National Standards Institute, Inc. (“ANSI”).

Mr. Smith is neither a person of ordinary skill in the art (“POSITA”) nor qualified to offer opinions on behalf of a POSITA regarding the patentability of the challenged claims. *Id.* at 4.

On the other hand, Patent Owner argues we should give substantial weight to Mr. Smith’s testimony. Sur-reply 23–24. Patent Owner contends Mr. Smith’s product design experience and education “qualify Mr. Smith as an expert in this case.” *Id.* at 24. Patent Owner also contends the Board found Mr. Smith qualified as an expert in a proceeding involving control systems for lawnmowers. *Id.* (citing *Toro Co. v. MTD Prods. Inc.*, IPR2016-00219, Paper 38, 3, 6–7 (PTAB May 10, 2017)).

As set forth in our Trial Practice Guide<sup>12</sup>, there is no requirement of a perfect match between a declarant’s experience and the relevant field. CTPG 34 (citing *SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360, 1373 (Fed. Cir. 2010)). We generally permit testimony where the declarant’s scientific, technical, or other specialized knowledge will help the Board understand the evidence or determine a fact in issue. *Id.* (citing Fed. R. Evid. 702(a)).

Mr. Smith has a Bachelor of Science degree in Mechanical Engineering and is a Certified Safety Professional in comprehensive practice. Ex. 2027 ¶¶ 3, 5. Mr. Smith is President of Alpine Engineering & Design, Inc., and has over thirty years of experience with mechanical design,

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<sup>12</sup> USPTO, *Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019*, <https://www.uspto.gov/TrialPracticeGuideConsolidated> (“CTPG”); *see also* Office Patent Trial Practice Guide, November 2019 Edition, 84 Fed. Reg. 64,280 (Nov. 21, 2019) (notifying the public of the availability of the Consolidated Trial Practice Guide).

including the design of lawnmower controls. *Id.* ¶ 6. Given his education in mechanical engineering and his experience with mechanical design, we find Mr. Smith’s testimony may be helpful in deciding factual issues in this proceeding. Moreover, when assigning weight to a declarant’s testimony, we consider the underlying facts or data upon which the testimony is based. CTPG 40–41. In our analysis of the asserted grounds of unpatentability, we weigh Mr. Smith’s testimony accordingly.

*B. Level of Ordinary Skill in the Art*

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The prior art may reflect the level of ordinary skill in the art. *Id.*

Petitioner contends a POSITA “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.” Pet. 12. Petitioner further contends “[a]n increase in experience could compensate for less education.” *Id.* (citing Ex. 1003 ¶ 45). Patent Owner adopts Petitioner’s proposed level of ordinary skill in the art exclusively for this proceeding. PO Resp. 3.

We find Petitioner’s proposal is consistent with the level of ordinary skill reflected in the asserted references, which involve various mechanical and electrical aspects of gardening tools. For instance, Reichart discloses a lawnmower having a handle that is adjustable to different heights to accommodate users of varying heights (Ex. 1007, code (57)), and Outils teaches a lawnmower having a safety device that prevents access to the

rotating cutting blade (Ex. 1014, code (57)). Accordingly, we adopt Petitioner’s proffered level of ordinary skill in the art.

### C. Claim Construction

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.* Furthermore, we expressly construe the claims to the extent necessary to determine whether Petitioner has proven that the challenged claims are unpatentable. *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))).

Petitioner proposes constructions for two claim terms, “power supply circuit” and “trigger.” Pet. 13–17. Patent Owner argues that constructions for “power supply circuit” and “trigger” are not required because the constructions are not relevant to the issues raised in this proceeding. PO Resp. 9–10; Sur-reply 2.

We agree with Patent Owner that express constructions of “power supply circuit” and “trigger” are unnecessary to resolve the dispute. For the reasons set forth in our analysis of the asserted grounds of unpatentability, we determine that no claim term requires an express construction for us to

ascertain whether Petitioner has shown the challenged claims to be unpatentable.

*D. Obviousness Based on Reichart and Nakano*

Petitioner challenges claims 1–10 under 35 U.S.C. § 103, contending the claimed subject matter would have been obvious over Reichart and Nakano. Pet. 27–60; Reply 5–15. Patent Owner argues Petitioner has failed to show that the asserted references render the claimed subject matter obvious. PO Resp. 10–29; Sur-reply 3–8.

*1. Independent Claim 1*

Independent claim 1 recites, in pertinent part:

a control device for sending a control signal to cause the motor to be activated by the operation assembly when one of the plurality of telescopic members is caused to be moved to a predetermined position relative to another one of the plurality of telescopic members or to prevent the motor from being activate by the operation assembly when the one of the plurality of telescopic members is caused to be moved away from the predetermined position relative to the another one of the plurality of telescopic members.

i.e., limitation [1d]. Ex. 1001, 8:27–36. Petitioner relies on Nakano for teaching this limitation. Pet. 38–49; Reply 7–9. Specifically, Petitioner argues each of the following components of Nakano’s extended detection system teaches the recited control device: switch 55 (Pet. 40–44 (citing Ex. 1015, 6:13–25, 9:8–16, 18:6–18, 19:24–20:3, 25:9–14, Figs. 3–5, 7, 11; Ex. 1003 ¶¶ 86–89)), Hall IC 56 (*id.* at 44–46 (citing Ex. 1015, 2:17–23, 25:21–26:12, Figs. 4, 7, 11; Ex. 1003 ¶¶ 90–91)), and microcomputer 211, which receives signals from switch 55 and/or Hall IC 56 (*id.* at 46–47 (citing Ex. 1015, 24:6–8, 24:23, 25:3–11, Figs. 7, 11; Ex. 1003 ¶ 92)). Per

Petitioner, each of these components causes the motor to be activated by the operation assembly when one of the telescopic members is moved to a predetermined position relative to the other telescopic member or prevents the motor from being activated by the operation assembly when the one telescopic member moves away from the predetermined position. *Id.* at 47–49 (citing Ex. 1003 ¶¶ 93–98).

Petitioner also argues a POSITA would have added Nakano’s control device to Reichart’s lawnmower. *Id.* at 36–38; Reply 9–13. Petitioner asserts safety requirements and industry guidelines mandated a mower’s normal starting controls to be located in an operating control zone defined essentially as a cylinder within 15 inches of the rearmost part of the power handle (Pet. 36–37 (citing Ex. 1008<sup>13</sup> §§ 1205.3(a)(11), 1205.5(c))), and a positive stop that does not allow the rearward part of the handle to come closer than 700 mm horizontally behind the closest path of the mower blades during normal operation (*id.* at 37 (citing Ex. 1030<sup>14</sup> § 10.7.2)).<sup>15</sup> Petitioner further asserts Reichart’s collapsible handle could bring its control

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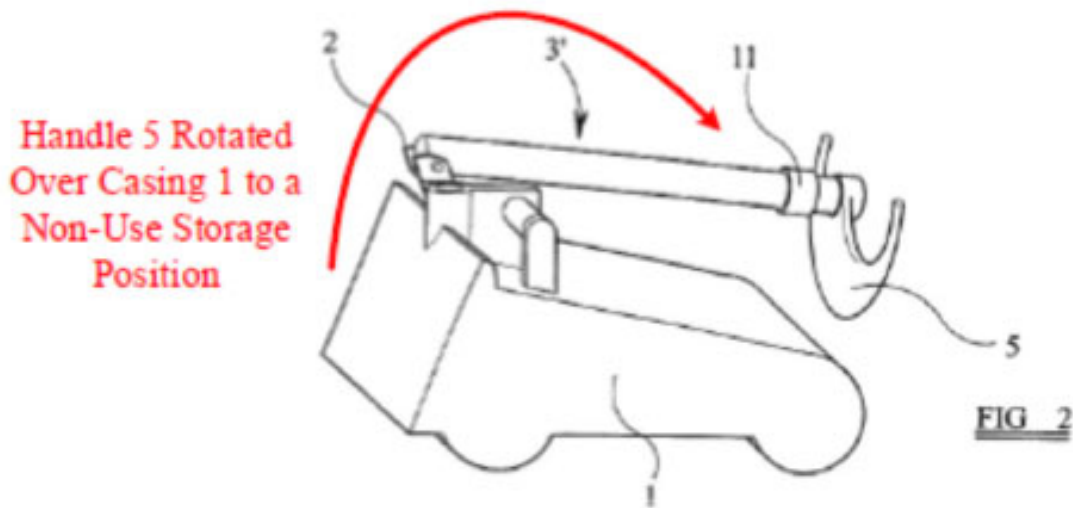
<sup>13</sup> Safety Standard for Walk-Behind Power Lawn Mowers, 16 C.F.R. § 1205 (2012) (“16 CFR 1205”) (Ex. 1008). Our citations to Exhibit 1008 refer to sections of the publication itself or Petitioner’s pagination for the exhibit.

<sup>14</sup> American National Standard for Consumer Turf Care Equipment—Pedestrian-Controlled Mowers and Ride-On Mowers—Safety Specifications, ANSI/OPEI B71.1-2012 (American National Standards Institute, Inc. 2012) (Ex. 1030). Our citations to Exhibit 1030 refer to sections of the publication itself or Petitioner’s pagination for the exhibit.

<sup>15</sup> We note that “[t]he use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.” Ex. 1030, 4.

components too close to the lawnmower for safe activation. *Id.* Petitioner similarly asserts that a POSITA would have considered Reichart's handle too short for safe use when the handle is fully collapsed in the storage position shown in Figure 2. *Id.* at 38. According to Petitioner, a "POSITA would have been motivated to adopt safety measures into Reichart's lawnmower to reduce the chance of injury to the user, and specifically to prevent the operation assembly from starting the motor when slid/collapsed into close proximity to the main body" (*id.* at 37–38), and that a "POSITA would have understood Nakano to offer obvious safety solutions to accomplish these goals" (*id.* at 38 (citing Ex. 1003 ¶ 81)).

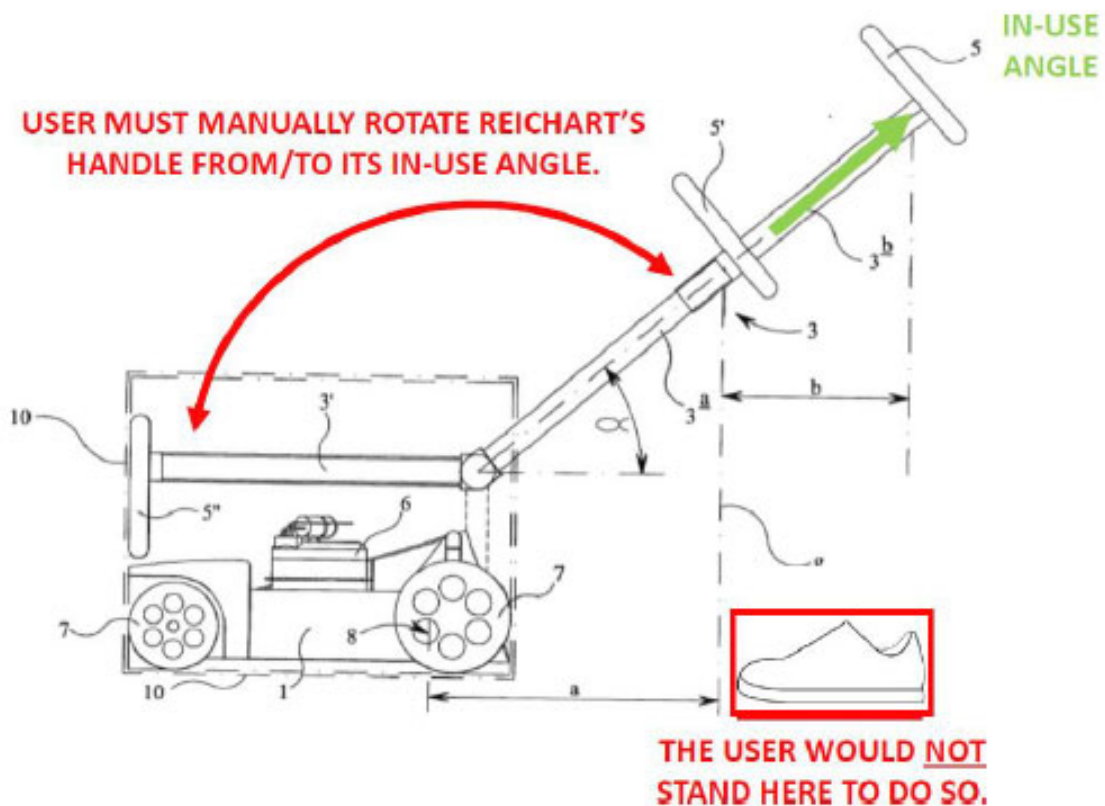
Patent Owner argues Petitioner has failed to show a POSITA would have combined the teachings of Reichart's lawnmower and Nakano's control device that disables the motor when the telescoping tubes are partially collapsed. PO Resp. 15–29; Sur-reply 6–8. In particular, Patent Owner contends Petitioner has failed to show that adding Nakano's control device to Reichart's lawnmower would have had any impact on the safety of the lawnmower. PO Resp. 16–17. According to Patent Owner, the only purported safety issue with Reichart's lawnmower that Petitioner identifies is a user being able to get too close to the rotating blade when the handle is rotated over the casing in the storage position shown in Figure 2. *Id.* at 21–22. Patent Owner provides an annotated version of Reichart's Figure 2, reproduced below. *Id.* at 22.



Patent Owner annotated Reichart's Figure 2, which shows the arrangement with the telescopic handle reduced to its minimum dimensions when out of operation, to include a red arrow showing the rotation of the handle from behind casing 1 to over casing 1 into the storage position. *Id.*; Ex. 1007, 3:23–25. Next to the red arrow and in red lettering, Patent Owner wrote, “Handle 5 Rotated Over Casing 1 to a Non-Use Storage Position.” PO Resp. 22. Patent Owner contends “[a] POSITA would have known as a matter of common sense that adding Nakano's alleged ‘control devices’—which purportedly enable/disable Nakano's motor based on the *sliding position* of Nakano's telescoping tubes ([Pet.] at 38, 47-49)—to Reichart's lawnmower would have done nothing to address the alleged safety issue of Reichart's handle 5 *rotating* to a non-use storage position.” *Id.* (citing Dec. 69; Ex. 2027 ¶ 212); *see also* Sur-reply 6–7 (arguing Petitioner's reason for adding Nakano's control device to Reichart's lawnmower lacks rational underpinning because the rotation, not the telescoping, of Reichart's handle brings a user and the operating elements too close to the casing).

In Reply, Petitioner maintains the storage position of Reichart's lawnmower presents the safety issue of allowing a user to get too close to

the blade path. Reply 9–12. Specifically, Petitioner contends that a POSITA would have been motivated to disable Reichart’s motor when the handle is at its shortest length because a POSITA is not able to keep Reichart’s minimum spacing “a” from the blade circular path while rotating the handle between the in-use and storage positions. *Id.* at 9–11. In support of this contention, Petitioner provides an annotated version of Reichart’s Figure 3, reproduced below. Reply 10.

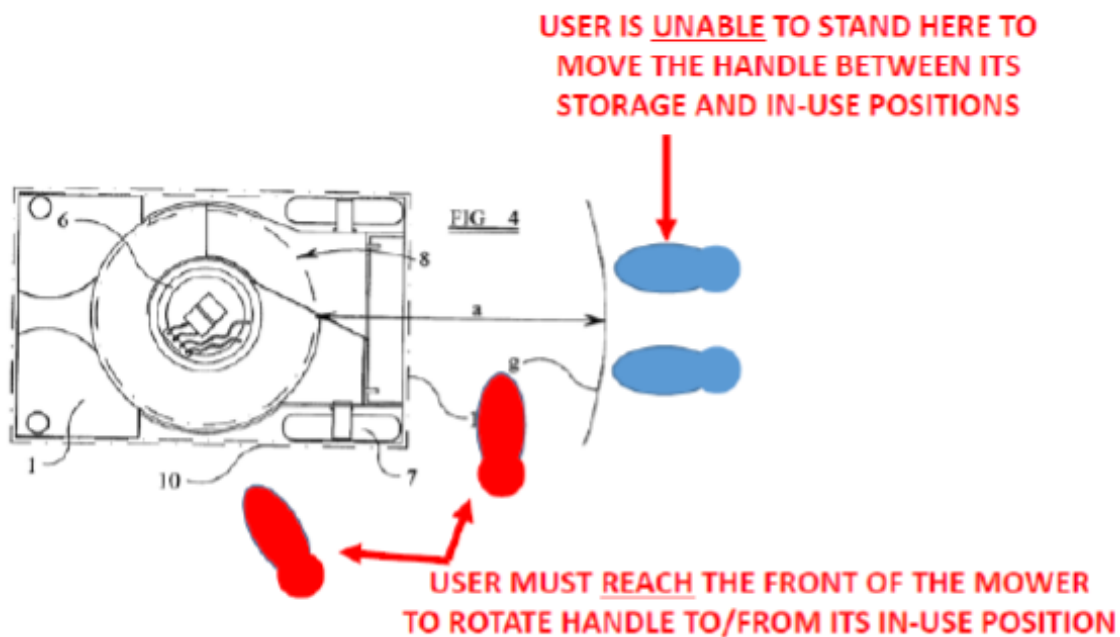


Reichart’s Figure 3 is a side view of the lawnmower with representations of different handle and linkage positions. Ex. 1007, 3:27–28. As shown in Figure 3, the lawnmower includes casing 1, telescopic tube 3, which comprises upper part 3b received in lower part 3a pivotally attached to the rear of casing 1, and handle 5 positioned on upper part 3b. *Id.* at 4:1–4, 4:22–26, 4:31–5:12, Fig. 3. Petitioner annotated Figure 3 to include a green

arrow along telescopic tube 3 to denote the in-use angle of the handle.

Reply 10. Petitioner also annotated Figure 3 to include a red arrow to show the rotation of the handle at its shortest length between the in-use position, i.e., handle position 5', where the handle is positioned above and behind casing 1 at minimum spacing "a," and the storage position, i.e., handle position 5'', where the handle is positioned over casing 1. *Id.* Petitioner further annotated Figure 3 to include a user's shoe enclosed in a red rectangle and spaced by minimum spacing "a" from casing 1. *Id.* Above the red arrow and in red lettering, Petitioner wrote, "USER MUST MANUALLY ROTATE REICHART'S HANDLE FROM/TO ITS IN-USE ANGLE," and, below the red rectangle in red lettering, Petitioner wrote, "THE USER WOULD NOT STAND HERE TO DO SO." *Id.*

Petitioner also provides an annotated version of Reichart's Figure 4, reproduced below. Reply 11.



Reichart's Figure 4 is a plan view of the lawnmower without the telescopic tube. Ex. 1007, 3:30–31. Figure 4 shows minimum spacing "a," which is

the distance between the handle at its shortest length and in the in-use position, i.e., handle position 5', and blade circular path 8. *Id.* at 4:31–5:1, Fig. 4. Petitioner annotated Figure 4 to include a pair of blue footprints spaced behind casing 1 at minimum spacing “a” and a pair of red footprints, with one red footprint at the side of casing 1 and the other behind casing 1 at a spacing less than minimum spacing “a.” Reply 11. Above the blue footprints and in red lettering, Petitioner wrote, “USER IS UNABLE TO STAND HERE TO MOVE THE HANDLE BETWEEN ITS STORAGE AND IN-USE POSITIONS,” and, next to the red footprints in red lettering, Petitioner wrote, “USER MUST REACH THE FRONT OF THE MOWER TO ROTATE HANDLE TO/FROM ITS IN-USE POSITION.” *Id.*

Petitioner’s reasoning for combining the teachings of Reichart’s lawnmower and Nakano’s control device that disables the motor when the telescoping tubes are partially collapsed is premised on the safety issue of a user getting too close to the blade path when the user rotates Reichart’s handle between the in-use and storage positions. Even if we agree with Petitioner that this safety issue exists, it is the rotation, not the telescoping, of the handle that causes a user to get too close to the blade path. Reichart discloses the shortest length of the handle in the in-use position maintains minimum spacing “a” with respect to blade circular path 8. Ex. 1007, 4:31–5:5, 6:1–5. Although reducing minimum spacing “a” could bring a user and the operating elements on the handle too close to the blade path, such a reduction is effected by rotating telescopic tube 3 over casing 1, not sliding upper part 3b of telescopic tube 3 relative to lower part 3a. Moreover, as shown in Petitioner’s annotated version of Reichart’s Figure 4, telescoping the handle to a different length would not cause a user to stand

in a different position other than the unsafe position shown with the red footprints to rotate the handle between the in-use and storage positions. Given that rotation, not telescoping, of Reichart's handle brings a user and the operating elements too close to the blade path, we agree with Patent Owner that modifying Reichart's lawnmower to include Nakano's control device that activates and deactivates the motor based on the sliding position of the telescopic tubes would not have ensured that the operating elements and the user are a safe distance from the blade path. Petitioner's rationale for adding Nakano's control device to Reichart's lawnmower lacks rational underpinning. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (“[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006))).

For these reasons, Petitioner has not persuaded us that a POSITA would have combined the teachings of Reichart and Nakano to result in the claimed subject matter, including limitation [1d]. Thus, Petitioner has not proven, by a preponderance of the evidence, that the subject matter of independent claim 1 would have been obvious over Reichart and Nakano.

## 2. *Claims 2–10*

For the reasons discussed above in section III.D.1, Petitioner has not persuaded us that a POSITA would have combined the teachings of Reichart and Nakano to result in the subject matter of independent claim 1, from which claims 2–10 depend. Petitioner has not proven, by a preponderance of the evidence, that the subject matter of dependent claims 2–10 would have been obvious over Reichart and Nakano.

*E. Obviousness Based on Outils and Matsunaga*

Petitioner challenges claims 11, 15, and 20 under 35 U.S.C. § 103, contending the claimed subject matter would have been obvious over Outils and Matsunaga.<sup>16</sup> Pet. 60–76; Reply 15–22. Patent Owner argues Petitioner has failed to show that the asserted references render the claimed subject matter obvious. PO Resp. 30–42; Sur-reply 9–18.

*1. Independent Claim 11*

Independent claim 11 recites, in pertinent part:

a second control device disposed at a position proximate to the pivot axis and configured to be controlled according to the rotating position of the handle wherein, when the handle rotates to the predetermined position relative to the main body, the control system allows starting of the motor and, when the handle rotates to a position other than the predetermined position relative to the main body, the control system is not allowed to start the motor,

i.e., limitation [1f]. Ex. 1001, 9:52–60. Petitioner relies on Outils for disclosing the second control device recited in this limitation. Pet. 70; Reply 16–19.

In the Petition, Petitioner asserts “Outils’[s] activation actuator 23 in Figure 10 is the claimed ‘second control device.’” Pet. 70. Petitioner contends Figure 10 shows activation actuator 23 disposed proximate to a pivot axis of handlebar 1. *Id.* Petitioner further contends activation

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<sup>16</sup> Petitioner’s heading for this asserted ground additionally lists claims 14 and 18. Pet. 60. Petitioner’s analysis for this asserted ground, however, does not include these claims. Moreover, in its identification of the challenge, Petitioner does not include claims 14 and 18 in this asserted ground. *Id.* at 4. Accordingly, we consider the reference to claims 14 and 18 in the heading to be a typographical error, and we understand this asserted ground does not contemplate claims 14 and 18.

actuator 23 is configured to be controlled according to the rotating position of handlebar 1 because cam 24, which engages actuator 23 to activate the motor, is located on rotatable handlebar 1. *Id.* Per Petitioner:

[W]hen the handle and ‘cam 24 provided on the handlebar 1’ . . . rotate to the predetermined (in-use) position relative to the main body (casing 6), the control system (including actuator 23 which engages cam 24) allows the first control device (the electrical supply contactor controlled by hold-to-run component 30) to start the motor. When, instead, handle 1 and cam 24 rotate to a (non-use) position other than the predetermined position relative to main body (casing 6), the control system, by virtue of activation actuator 23 being separated from cam 24, is not allowed to start the motor.

*Id.* (quoting Ex. 1014, 8:24) (citing Ex. 1003 ¶ 143).

Patent Owner maintains Petitioner has failed to show that Outils discloses the second control device recited in limitation [11f]. PO Resp. 33–37; Sur-reply 11–14. Patent Owner contends Outils does not disclose that activation actuator 23 interacts with the electrical supply contactor, which Petitioner considers a first control device, such that activation actuator 23 would allow or not allow the electrical supply contactor to start the motor. PO Resp. 35; Sur-reply 11. Patent Owner also contends that Outils’s activation actuator 23 cannot allow or not allow the electrical supply contactor to start the motor because activation actuator 23 and the electrical supply contactor are components of separate, distinct embodiments of Outils’s control system. PO Resp. 35 (citing Ex. 2027 ¶¶ 58–61, 254; Ex. 2028, 89:2–10); *see also* Sur-reply 11–12 (arguing Petitioner does not dispute that activation actuator 23 and the electrical supply contactor are components of separate, distinct embodiments). Patent Owner further contends Petitioner does not propose combining Outils’s

embodiments so that activation actuator 23 would allow or not allow the electrical supply contactor to start the motor and provides no reasons why a POSITA would have made such a combination. PO Resp. 36; Sur-reply 12. Moreover, Patent Owner alleges there would have been no reason to include Outils's activation actuator 23 in the embodiment having hold-to-run control component 30, remote control cable 29, and the electrical supply contactor because hold-to-run control component 30, remote control cable 29, and the electrical supply contactor, collectively, and activation actuator 23 perform the same function: stopping the motor and preventing it from restarting when the handle is rotated out of position. PO Resp. 36 (citing Ex. 1014, 4:14–17, 4:24–27, 5:1–8, 8:22–29; Ex. 2027 ¶¶ 254–255; Ex. 2028, 89:2–10); *see also* Sur-reply 12 (arguing hold-to-run control component 30, remote control cable 29, and the electrical supply contactor, collectively, and activation actuator 23 perform the same function).

In its Reply, Petitioner confirms it is relying solely on the cutting blade activation means of the embodiment of Figure 10, namely activation actuator 23 and cam 24, and argues this embodiment discloses a second control device that unlocks and locks a first control device, as limitation [11f] requires. Reply 16–19. According to Petitioner, in Figure 1, Outils discloses an embodiment having a Bowden cable<sup>17</sup>, i.e., remote

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<sup>17</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, 140:12–22; *see also* Ex. 2027 ¶ 125 (“I agree with Mr. Reed that a POSITA would have understood Outils'[s] remote control

control cable 29, that becomes slack when handlebar 1 is raised and thereby turns off the electrical supply contactor associated with the on/off lever, i.e., hold-to-run control component 30. *Id.* at 16 (citing Ex. 1014, 4–5).

Petitioner asserts that the embodiments shown in Outils’s Figures 5–10 “disclose *alternatives* to the Bowden cable,” and that “[i]n Figure 10, the embodiment relied upon in the Petition, the Bowden cable is replaced by actuator 23 that interacts with cam 24.” *Id.* at 16–17. Petitioner further asserts that “while the *Bowden cable* of Figure 1 is replaced in Figure 10, [a] POSITA would understand Figure 10 must still include a user’s on/off component even though none is illustrated.” *Id.* at 17. Petitioner also asserts a “POSITA would know that Outils *must* have a manual on/off component, and it must be atop Outils’[s] handle 1 just like [hold-to-run control] component 30 (Figure 1) with its own associated contactor because 16 CFR 1205.5(c) mandates it.” *Id.* at 17–18; *see also* Tr. 73:18–20 (“[W]e’re talking about the user operable on/off switch of a mower. I mean, it almost goes without saying that these devices have them.”). Additionally, Petitioner asserts that Outils discloses its cutting blade means supplement the user’s on/off control (*id.* at 18–19 (citing Ex. 1014, 2:24–27)), and that a

POSITA would have understood Outils’[s] Figure 10 to include hold-to-run lever 30 (or comparable regulation-compliant component) and its electric supply contactor from Figure 1 (and would have further understood that neither lever 30 nor the contactor it is associated with, can start the motor when actuator 23 disables it), but without cable 29 acting as a Bowden cable

(*id.* at 19 (citing Ex. 1003 ¶¶ 133, 142–143, 155)).

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cable 29 to be a Bowden cable.”); Ex. 1014, 5:4–8 (discussing one operation of remote control cable 29).

Petitioner's position is that the embodiment shown in Outils's Figure 10 discloses the recited second control device for allowing or not allowing the control device, which includes the first control device, to start the motor, because a POSITA would have understood this embodiment includes activation actuator 23 and cam 24 that prevent hold-to-run control component 30 and the electrical supply contactor associated therewith from activating the motor.<sup>18</sup> Petitioner has not persuaded us that a POSITA would have had such an understanding of the embodiment shown in Outils's Figure 10.

At the outset, it is undisputed that the text describing Figure 10 in Outils does not mention a hold-to-run control component connected to an

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<sup>18</sup> We do not understand Petitioner to be arguing that it would have been obvious to combine hold-to-run control component 30 and the electrical supply contactor associated therewith from Outils's embodiment shown in Figure 1 with activation actuator 23 and cam 24 of Outils's embodiment shown in Figure 10. A petitioner must explain why a POSITA 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 Co.*, 868 F.3d 1342, 1345–46 n.1 (Fed. Cir. 2017) (“Whether a rejection is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful . . .”). Petitioner does not provide any such explanation, reinforcing our understanding that Petitioner relies on the position that a POSITA would have understood the embodiment of Figure 10 to include, without modification, hold-to-run control component 30 controlling the electrical supply contactor from Figure 1.

electrical supply contactor. Ex. 1014, 8:22–9:13.<sup>19</sup> Similarly, Petitioner does not direct us to, nor do we discern, any depiction *associated with Outils's Figure 10* of a hold-to-run control component connected to an electrical supply contactor.

Turning to Petitioner's assertion that activation actuator 23 and cam 24 are alternatives to remote control cable 29 and replace the remote control cable 29 in the embodiment of Figure 10, Petitioner does not point to any disclosure in Outils or testimony from Mr. Reed to support this assertion. Outils discloses that remote control cable 29 is part of means 28 for controlling the activation of the cutting blade. Ex. 1014, 4:5–8.

According to Outils:

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 a motor brake, a brake coupling or 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.

*Id.* Means 28, including remote control cable 29 and hold-to-run control component 30, is shown in Figures 1 and 3, reproduced below.

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<sup>19</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. Ex. 1014, 7:15–8:20, Figs. 8, 9; Dec. 26; Reply 8 n.6.

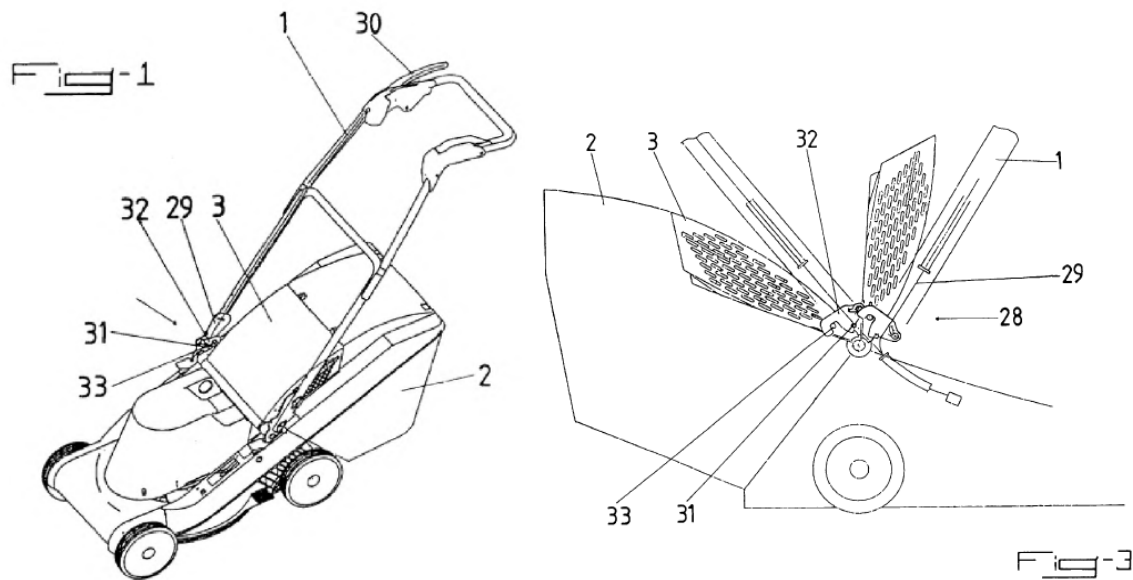


Figure 1 is a perspective view of a mower equipped with a safety device in an operating position, and Figure 3 is a partial side elevation view of the rear portion of a mower equipped with a safety device showing decoupling of the cutting blade with the handlebar in an in-use position and with the handlebar rotated forwardly over the body of the mower. *Id.* at 3:5–6, 3:9–11. As shown in Figures 1 and 3, the mower includes hold-to-run control component 30 atop handlebar 1. Hold-to-run control component 30 is connected to remote control cable 29, which runs along handlebar 1 from hold-to-run control component 30 to the body of the mower. Outils discloses that:

If the handlebar 1 were to be inadvertently pivoted forward during the operation of the blade, without the hold-to-run control component 30 being released, the safety cover 3 would not follow the movement of said handlebar 1 and would remain in the protection position above the receptacle 2 or in front of the ejection duct. In addition, *since the distance between the sleeve stops of the cable 29 is reduced during said pivoting, said cable would be released, resulting in sufficient slack to ensure that the driving of the blade would be automatically interrupted due to the power supply to the motor being cut off or due to the driving*

*of the spindle thereof being interrupted through action on a brake and/or a coupling.*

*Id.* at 5:1–8 (emphasis added). Thus, Outils discloses rotating handlebar 1 releases remote control cable 29, which acts on a motor brake, a brake coupling, or an electrical supply contactor to prevent hold-to-run control component 30 from activating the motor.

The embodiment shown in Outils's Figure 10 does not include means 28 for controlling the activation of the cutting blade, but instead includes cutting blade activation means 4. In this embodiment, cutting blade activation means 4 is formed by activation actuator 23 and cam 24 such that tilting of handlebar 1 causes cam 24 to act on activation actuator 23 to stop the motor and/or decouple and brake the cutting blade. *Id.* at 8:22–29. Activation actuator 23 is of the all-or-nothing type in that it allows the motor to be restarted only after handlebar 1 has been returned to the in-use position. *Id.* at 9:10–13.

According to Outils, like means 28 (which includes hold-to-run control component 30, remote control cable 29, and a motor brake, a brake coupling, or an electrical supply contactor), means 4 (which comprises activation actuator 23 and cam 24) performs the function of stopping the motor and preventing actuation of the motor when handlebar 1 is rotated out of position. *Id.* at 5:1–8, 8:22–29, 9:10–13. Similarly, Mr. Smith testifies that means 28 and means 4 perform the same function of disabling the motor when handlebar 1 is rotated out of position. Ex. 2027 ¶ 255. The evidence demonstrates that activation actuator 23 and cam 24, which compose means 4, are alternatives to means 28, not that activation actuator 23 and cam 24 are alternatives to only remote control cable 29 of means 28, as Petitioner asserts.

Regarding Petitioner's assertion that, in view of safety regulations, particularly 16 CFR 1205, a POSITA would have understood Outils's lawnmower must have a manual on/off component atop Outils's handlebar, Petitioner equates the on/off component prescribed by 16 CFR 1205 with Outils's hold-to-run control component 30 and its associated electrical supply contactor, which, via activation actuator 23 and cam 24, are prevented from activating the motor when handlebar 1 is rotated out of position. Petitioner, however, does not provide any evidence in support of this proffered equivalence.

Outils does not disclose that hold-to-run control component 30 and the electrical supply contactor associated therewith function as an on/off component. Rather, Outils discloses that, when hold-to-run control component 30 is not actuated, remote control cable 29 is released and causes a motor brake, a brake coupling, or an electrical supply contactor to interrupt the driving of the blade. Ex. 1014, 4:5–17, Figs. 1, 3.

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 remote control 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.” (citation omitted)); 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. We agree with Petitioner that a mower will have some user-controlled mechanism to start and stop the mower, but it does not “go[] without saying” that hold-to-run control component 30 and the electrical supply contactor are necessarily that mechanism. Although section 1205.5(c) of 16 CFR 1205 requires a “normal starting means” within the operating control zone, we do not read the regulation to require that starting means to be the control of section 1205.5(a) requiring continuous contact. Ex. 1008, 7–8. Accordingly, 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 are necessarily the mower’s user operable on/off control.

Moreover, in describing the embodiment of *Figure 1*, Outils discloses that hold-to-run control component 30 can function in one of three different ways. Hold-to-run control component 30, through remote control cable 29, can act on (1) a motor brake, (2) a brake coupling, or (3) an electrical supply contactor. Ex. 1014, 4:5–8; *see also* Pet. 64 (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 POSITA 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 connected to hold-to-run control component 30—a motor brake, a brake coupling, *or* an electrical supply contactor—a POSITA would have understood from Outils that the embodiment of Figure 10 specifically includes an electrical supply contactor.<sup>20</sup>

To the extent Mr. Reed’s testimony provides any support for Petitioner’s position that a POSITA would have understood the embodiment of Outils’s Figure 10 to include hold-to-run control component 30 for controlling only the electrical supply contactor, not the other two possible system components, we give little weight to the testimony. Mr. Reed declares 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 ¶ 140; *see also id.* ¶ 142 (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 electrical supply contactor). This testimony is conclusory, as it provides no supporting analysis or evidence. *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.”).

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<sup>20</sup> Again, as we note above, we do not understand Petitioner to argue that it would have been obvious to modify the embodiment of Figure 10 to include an electrical supply contactor. *See supra*, note 16.

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 the electrical supply contactor plays in Outil’s lawnmower, how that role may differ from a motor brake or brake coupling, or why a POSITA 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 remote control cable 29 in the embodiment of Figure 1 relates to activation actuator 23 and cam 24 in the embodiment of Figure 10, or that a POSITA 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 remote control cable 29 (and, presumably, with a different cable). *See* Reply 17 (arguing that the Bowden cable, i.e., remote control cable 29, of the embodiment of Figure 10 would have been replaced and citing to no evidence in support).

Indeed, Mr. Reed’s testimony merely parrots language from the Petition. *Compare, e.g.,* Ex. 1003 ¶ 143, *with* Pet. 70. 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.” Fed. R. Evid. 702(a). Instead, we are often left with conclusory testimony with little or no supporting evidence.

Petitioner’s reliance on 16 CFR 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: (i) [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—hold-to-run control component 30 controlling an electrical supply contactor, a motor brake, *or* a brake coupling. Again, Petitioner does not persuasively explain why these regulations require hold-to-run control component 30 controlling *an electrical supply contactor*, to the exclusion of the other two possible system components, such that a POSITA would have understood the embodiment of Outils’s Figure 10 to have hold-to-run control component 30 that controls an electrical supply contactor.

As is evident from the language of the regulation, section 1205.5(a) is directed to a blade control system, with the “continuous contact” requirement associated with that system. Ex. 1008, 7. 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 operating control zone may be independent of any blade control associated with the “continuous contact” requirement.

Equally unavailing is Petitioner’s reliance on Outils’s teaching that, “[a]lthough 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.” Reply 19 (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 (disclosing 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 POSITA that the mower includes hold-to-run control component 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 view of the foregoing, Petitioner has not persuaded us that a POSITA would have understood the embodiment shown in Outils’s Figure 10 includes hold-to-run control component 30 and the electrical supply contactor together with activation actuator 23 and cam 24, much less that, in the embodiment of Figure 10, actuator 23 and cam 24 prevent hold-to-run control component 30 and the electrical supply contactor from activating the motor. Thus, Petitioner has not demonstrated Outils discloses or suggests a second control device for allowing or not allowing the control device to start motor, as recited in limitation [11f], and has not proven, by a preponderance of the evidence, that the subject matter of independent claim 11 would have been obvious over Outils and Matsunaga.

2. *Independent Claim 15*

Similar to independent claim 11, independent claim 15 recites, in pertinent part:

a second control device disposed at a position proximate to the end of the handle and configured to be controlled according to a rotating position of the handle wherein, when the handle rotates to the predetermined 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 predetermined 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,

i.e., limitation [15f]. Ex. 1001, 10:38–49. Put simply, limitation [15f] of independent claim 15 generally corresponds to limitation [11f] of independent claim 11.

Petitioner’s arguments for limitation [15f] are similar to its arguments for limitation [11f]. Pet. 75; Reply 16–19. In particular, like limitation [11f], Petitioner relies on Outils for disclosing the second control device recited in limitation [15f]. Pet. 75; Reply 16–19.

For the reasons discussed above in section III.E.1, Petitioner has not persuaded us that Outils discloses or suggests a second control device that unlocks the first control device to allow starting of the motor or locks the first control device to not allow starting of the motor, as recited in limitation [15f]. Consequently, Petitioner has not proven, by a preponderance of the evidence, that the subject matter of independent claim 15 would have been obvious over Outils and Matsunaga.

3. *Claim 20*

For the reasons discussed above in section III.E.2, Petitioner has not persuaded us that Outils discloses or suggests the second control device recited in independent claim 15, from which claim 20 depends. Petitioner has not proven, by a preponderance of the evidence, that the subject matter of dependent claim 20 would have been obvious over Outils and Matsunaga.

*F. Obviousness Based on Outils, Matsunaga, Langdon, and Nakano*

Petitioner challenges claims 12, 16, 17, and 21<sup>21</sup> under 35 U.S.C. § 103, contending the claimed subject matter would have been obvious over Outils, Matsunaga, Langdon, and Nakano. Pet. 77–83; Reply 22–28. Patent Owner argues Petitioner has failed to show that the asserted references render the claimed subject matter obvious. PO Resp. 43–54; Sur-reply 19–23.

For the reasons discussed above in sections III.E.1 and III.E.2, Petitioner has not persuaded us that Outils discloses or suggests the second control device recited in independent claims 11 and 15, from which claims 12, 16, 17, and 21 depend. Petitioner has not proven, by a preponderance of the evidence, that the subject matter of dependent

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<sup>21</sup> Petitioner’s heading for this asserted ground additionally lists claim 13. Pet. 77. Petitioner’s analysis for this asserted ground, however, does not include claim 13. Moreover, in its identification of the challenge, Petitioner does not include claim 13 in this asserted ground. *Id.* at 4. Accordingly, we consider the reference to claim 13 in the heading to be a typographical error, and we understand this asserted ground does not contemplate claim 13.

claims 12, 16, 17, and 21 would have been obvious over Outils, Matsunaga, Langdon, and Nakano.

*G. Obviousness Based on Outils, Matsunaga, Milcoy, and Hilchey*

Petitioner challenges claim 19 under 35 U.S.C. § 103, contending the claimed subject matter would have obvious over Outils, Matsunaga, Milcoy, and Hilchey. Pet. 83–87; Reply 28. Patent Owner argues that “[b]ecause Petitioner has failed to show that Outils in combination with Matsunaga renders Challenged Claim 15 obvious, Petitioner has likewise failed to show that Outils in combination with Matsunaga, Milcoy, and Hilchey renders Challenged Claim 19 obvious.” PO Resp. 54–55; *see also* Sur-reply 23 (arguing this asserted ground of unpatentability based on Outils, Matsunaga, Milcoy, and Hilchey rises and falls with the asserted ground based on Outils and Matsunaga).

For the reasons discussed above in section III.E.2, Petitioner has not persuaded us that Outils discloses or suggests the second control device recited in independent claim 15, from which claim 19 depends. Petitioner has not proven, by a preponderance of the evidence, that the subject matter of dependent claim 19 would have been obvious over Outils, Matsunaga, Milcoy, and Hilchey.

*H. Constitutionality of the Proceeding*

Patent Owner contends that this 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.” PO Resp. 65. Patent Owner also contends, 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.*, 141 S. Ct. 549 (2020), was “ineffective and, in any event, inapplicable to the present panel or proceeding.” *Id.*

The Supreme Court resolved the issue in *United States v. Arthrex, Inc.*, 141 S. Ct. 1970, 1986–87, 1997 (2021). We, therefore, do not reach Patent Owner’s Appointments Clause challenge.

*I. Petitioner’s Motion to Update Mandatory Notice to Add Real Parties-In-Interest*

Prior to the Decision granting institution of *inter partes* review, Petitioner filed a Motion to Update Mandatory Notice to Add Real Parties-In-Interest, in which Petitioner seeks to update its mandatory notice to identify Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc. (“the Disputed Entities”) as real parties in interest (“RPIs”), without changing the filing date of the Petition. Mot. RPI 1. Also prior to institution, Patent Owner filed an Opposition to Petitioner’s Motion, and Petitioner filed a Reply to the Opposition.

In the Decision granting institution, we reserved judgment on Petitioner’s Motion to Update Mandatory Notice to Add Real Parties-In-Interest to allow the parties to further develop the record with respect to the RPI issue. Dec. 3 n.1, 71–72. The parties address the RPI

issue during trial in their post-institution briefs. PO Resp. 55–65<sup>22</sup>;  
Reply 28–30.

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. § 42.8 (requiring a petition to include mandatory notices, including an identification of each RPI).

[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, 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.” CTPG 12. 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, 6 (PTAB Jan. 24, 2019) (precedential) (citing Office Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012)).

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<sup>22</sup> In its Opposition to Petitioner’s Motion, Patent Owner argues against the addition of all three of the Disputed Entities that Petitioner seeks to identify as RPIs. Opp. RPI 1. During trial, Patent Owner focuses on only two of the Disputed Entities—Techtronic Industries Co. Ltd. and Homelite Consumer Products, Inc. PO Resp. 55.

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, 6 (PTAB Mar. 4, 2016) (precedential); *see also Blue Coat Sys., Inc. v. Finjan, Inc.*, IPR2016-01444, Paper 11, 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 interest.” (quoting *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1374 n.9 (Fed. Cir. 2018) (en banc))). Accordingly, a petitioner may amend its mandatory notices to add a RPI 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.”). In determining whether to permit a petitioner to amend its mandatory notices to add a RPI 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*, IPR2017-01917, Paper 86 at 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.” Mot. RPI 7; *see also* Reply 29–30 (arguing that it is an “irrefutable fact” that none of the Disputed Entities are time-barred under § 315). Patent Owner does not dispute this contention. *See* Opp. RPI; PO Resp. 55–65.

With respect to any bad faith or gamesmanship on Petitioner’s part, 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. Mot. RPI 4–5 (citing Exs. 2005, 2006). Petitioner further 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 (“Homelite Consumer Products, Inc., is a wholly owned subsidiary of Techtronic Industries North America, Inc.”). 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. Mot. RPI 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. *Id.* at 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.” *Id.* at 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.

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.” Opp. RPI 6. Patent Owner argues that Petitioner was aware of these entities and consciously omitted them as RPIs, to the benefit of these entities. *Id.*; PO Resp. 61–64. Patent Owner argues that Petitioner’s refusal to allow Patent Owner to attach confidential documents obtained in the parallel litigation to its Opposition evidences Petitioner’s bad faith. PO Resp. 63 (citing 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 RPIs. *Id.* at 59–60. Patent Owner concludes that Petitioner’s actions, at best, constitute willful blindness and, at worst, bad faith. *Id.* at 64.

Petitioner responds that Patent Owner's claims of gamesmanship and bad faith are unsupported. Reply RPI 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 [to which] Patent Owner agreed." *Id.*

Without more, Petitioner's unwillingness to admit the Disputed Entities are in fact RPIs is not evidence bad faith or gamesmanship. *See Proppant*, IPR2017-01917, Paper 86, 14–16 (finding the patent owner's identification of two parties as RPIs without admitting they are RPIs is not evidence of gamesmanship). Significantly, Patent Owner does not identify any way that Petitioner may benefit from not naming the Disputed Entities as RPIs, such that Petitioner's actions could be characterized as in bad faith or in some way as gaming the *inter partes* review system. Moreover, 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.

Also, Patent Owner does not argue that allowing Petitioner to amend its mandatory notices would prejudice Patent Owner. Instead, Patent Owner argues: "Permitting amendments to mandatory disclosures, upon cursory proclamations of good faith effectively nullifies the requirement set forth in [35 U.S.C. §] 312 that all real parties in interest must be identified for a petition to be considered. . . . Petitioner must bear the consequence of its omission." PO Resp. 64–65 (internal quotation marks omitted). 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.” CTPG 12. The panel is not aware of any conflicts of interest with the Disputed Entities. 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 and the evidence before us, we conclude that Petitioner has shown a sufficient basis for amending its mandatory notices to add Techtronic Industries Co. Ltd., Techtronic Industries North America, Inc., and Homelite Consumer Products, Inc., as RPIs without changing the filing date of the Petition. We, therefore, grant Petitioner’s 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 RPIs.

*J. Petitioner’s Motion to Seal*

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 argued 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. Paper 37, 7.

In its Motion to Seal, Petitioner seeks to seal certain portions of Mr. Sowell’s deposition transcript. Mot. 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, and 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 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 37, 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.

*K. 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.” Mot. Strike 1. 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.

#### IV. CONCLUSION

For the reasons above, Petitioner has not proven, by a preponderance of the evidence, the unpatentability of claims 1–12, 15–17, and 19–21 of the '588 patent.

<b>Claims</b>	<b>35 U.S.C. §</b>	<b>References</b>	<b>Claims Shown Unpatentable</b>	<b>Claims Not Shown Unpatentable</b>
1–10	103	Reichart, Nakano		1–10
11, 15, 20	103	Outils, Matsunaga		11, 15, 20
12, 16, 17, 21	103	Outils, Matsunaga, Langdon, Nakano		12, 16, 17, 21
19	103	Outils, Matsunaga, Milcoy, Hilchey		19
<b>Overall Outcome</b>				1–12, 15–17, 19–21

#### V. ORDER

In consideration of the foregoing, it is:

ORDERED that claims 1–12, 15–17, and 19–21 of the '588 patent have not been shown to be unpatentable;

FURTHER ORDERED that Petitioner's Motion to Update Mandatory Notice to Add Real Parties-In-Interest is *granted*;

FURTHER ORDERED that Petitioner's Motion to Seal is *granted*;

FURTHER ORDERED 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;

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

FURTHER ORDERED that, as this is a Final Written Decision, a party 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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