UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

CHERVON (HK) LIMITED,
Patent Owner.

Case IPR2020-00886

U.S. Patent No. 9,826,686
Issue Date: November 28, 2017
Title: Gardening Tool

PETITIONER'S REPLY

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I. INTRODUCTION

The IPR Petitions[1] against the Challenged Patent and related patents demonstrated that obvious, non-complex combinations of prior art components render the challenged claims unpatentable. Patent Owner's ("PO") Response ("POR") hopscotches between arguments that are incorrect to those that support the Petition. It also relies on the inconsequential views from a professional expert who admits to having virtually no experience in the mower or gardening tool arts.

Nothing in POR rebuts the preponderance of evidence demonstrating the claims' unpatentability or the sworn testimony of Petitioner's expert – a veteran lawnmower and gardening tool designer. POSITA would have found the claimed inventions obvious, and the Board should find the challenged claims unpatentable.

II. THE OPINIONS OF PATENT OWNER'S EXPERT SHOULD BE AFFORDED LITTLE OR NO WEIGHT.

A. Mr. Smith Has Negligible Design Experience in Mowers or Gardening Tools.

PO attempts to refute the sworn testimony of Petitioner's expert Mr. Smith Reed, a veteran in gardening equipment design, by relying upon the declaration of Mr. Fred P. Smith. Ex.2027. Mr. Smith's general engineering background, however, is too irrelevant, too old, and too forgettable to render his testimony

[1] IPR2020-00884, 00886, -00887, -00888.

useful or helpful to the Board. Mr. Smith's testimony should be given very little weight.

Of the design experience highlighted in Mr. Smith's declaration, none involved mowers or gardening equipment. Ex.2027, ¶6 (aerial lifts, refuse trucks, dump trailers, grain carts, exercise equipment, portable putting greens); *id*., Ex.1 (Smith CV) (trucking equipment, refuse equipment, cranes, manlifts, specialty axles, zip lines, amusement rides, exercise equipment, radio frequency enclosures, rotomolded containers).[2] The only exception is "mower controls" (Ex.2027, ¶6) but Mr. Smith testified that his experience was limited to two contemporaneous projects for Husqvarna over the course of a few months in "the late '90s." Ex.1040, 35:19-38:12. Those projects involved a hydraulics-driven walk-behind mower and a zero-turn-radius ("ZTR") riding mower, with the latter project being stopped before completion[3]. *Id*., 39:1-40:1. Since those two projects, Mr. Smith

[2] None of Mr. Smith's 70-odd patents involves gardening equipment. Ex.2027, ¶6, Ex.2; Ex.1040, 31:23-32:6.

[3] In an unrelated IPR, Mr. Smith testified his ZTR work involved only concept sketches; no functional work was done. Ex.1041, 39:6-40:2. Mr. Smith excluded

has not participated in the design of ***any*** grass or turf mower. *Id*., 40:8-11. Mr. Smith has ***never*** participated in the design of a push-type mower. *Id*., 40:12-16; 36:7-12; 37:5-7. When asked broadly about ***any*** experience designing the very general category of "battery-powered gardening equipment," he had only a limited recollection of an unspecified weedwacker-type project but "[i]t's been so long ago, I don't – I don't recall exactly any of the details of that." *Id*., 40:17-22.

B. Mr. Smith Has No Experience with the Safety Regulations and ANSI Standards Referenced in the Petition and POR

POR also relies on Mr. Smith's testimony for certain arguments relating to federal regulations and ANSI standards that pertain to gardening equipment design and safety. But Mr. Smith has ***never*** consulted or attempted to have a product comply with the regulations (16 CFR 1205) that Petitioner's expert Mr. Reed testified would have motivated certain obvious modifications to the prior art. Ex.1040, 42:23-43:8. Mr. Smith has also ***never*** consulted or attempted to have a product comply with ANSI B71.1, which is also referenced in this proceeding. *Id*., 43:21-44:7. Finally, Mr. Smith could not recall ever consulting or attempting to have a product comply with ANSI B175.3, another standard referenced in these

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this August 2016 deposition and at least one other (IPR2016-00194) from his current declaration (Ex.2027, Ex.C) despite testifying that he listed all verbal testimony since 2016. Ex.1040, 30:2-31:2.

proceedings. *Id*., 44:8-19.

In fact, Mr. Smith could not recall even ***looking*** at those regulations or ANSI standards before his engagement in Spring 2019 for this proceeding. *Id*., 11:21-12:3; 44:20-45:8. Nor did he recall ever having consulted European counterparts to those regulations or standards. *Id*., 45:9-15 ("I'm familiar with, um, you know, ISO standards in general, uh, not specifically for, um, you know, a push-behind mower.").[4]

All told, Mr. Smith has no background in "electric walk-behind lawnmowers and associated performance and safety features," which is how PO defines the "field of endeavor" of the Challenged Patent. POR, 14. Mr. Smith is not a POSITA for the Challenged Patent and is not qualified to offer opinions on POSITA's behalf regarding the patentability of the challenged claims.

In contrast, Petitioner submitted sworn testimony from Mr. Reed, a career product designer with years of directly relevant experience in lawn mowers and turf care equipment, who designed and/or reviewed the designs for products

[4] That Mr. Smith boasts to having been engaged as a litigation consultant over 500 times in the last twenty years (a rate of over two per month) highlights that he is a litigation expert, not someone proficient in the technical field of the Challenged Patent. Ex.2027 (Ex.1, p.2).

including industrial mowers (walk-behind and riding), consumer mowers (walk-behind and riding), pull-behind mowers, tractors, utility vehicles and trailer type turf maintenance machines, garden tillers and snow throwers. Ex.1003, ¶¶4-11, Ex.A. As the Board considers the evidence regarding the obviousness of the claimed combinations, the Board should weigh the relative experience and credibility of the witnesses submitting testimony.

III. CLAIM CONSTRUCTION.

A. "Power Supply Circuit"

PO suggests the Court in the related litigation "rejected Petitioner's proposed construction" (POR, 9-10), but the Court ***adopted*** Petitioner's terminology in its construction: "the path, consisting of one or more components, between an electrical power source and the motor taken by current that drives the motor." Ex.2025, 8. The Court's construction, if adopted here, would not impact the Petition's demonstration of the challenged claims' unpatentability.

B. "Locks"/"Unlocks"

PO accepts Petitioner's proposed construction as "electrically disabling" and "electrically enabling," respectively. POR, 10.

C. "Accommodating position relative to the main body"

POR introduces this term for construction but none of the intrinsic evidence supports PO's proposed construction.

"There are only two exceptions" in which claim terms are not given their full

ordinary and customary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). Here, neither applies. The ***claims*** define "accommodating position" as a position "when the gardening tool is not being used". Ex.1001, claim 1 (8:31-32), claim 11 (9:64-65). The specification does not define the term, and simply indicates "an" accommodating position could be located over the main body; another non-use position is afforded by notch 234 in Figure 4. Ex.1001, 5:19-20. The intrinsic evidence thus indicates that the term should be given its plain and ordinary meaning as "**a position relative to the main body for when the gardening tool (mower) is not being used**."

POR relies in part on a passage from the '26686 patent that the user "may achieve accommodation by rotating the handle 20 to adjust an operation posture or reducing space occupied by the mower 100." POR, 12; Ex.1001, 2:39-42. The passage contradicts PO's proposed construction because it suggests that "accommodation" encompasses "an operation posture," *i.e.*, an in-use position of handle 20. The claim language, however, is clear that the *claimed* accommodating position is when the tool is not being used. PO's proposed construction should be rejected.

IV. GROUND 1.

A. Matsunaga is Analogous Art to the Challenged Patent.

PO is wrong to suggest Matsunaga is non-analogous art to the Challenged Patent. POR, 13-16. First, this Board's Institution Decision disagreed with PO's previous contention that Matsunaga was non-analogous art. Paper 21, 50-52. Second, Matsunaga's invention "may be particularly embodied as a grass mower" but "can be applied to any electric power tool activated by a motor as a driving source." Ex.1006, 4:55, 19:46-47; *see* Petition, 41-42 and Paper 21 (Institution Decision), 52 ("Matsunaga teaches a battery-powered electric lawn mowing device"). PO also incorrectly contends that "neither Petitioner nor its expert asserts that Matsunaga is from the same field of endeavor as the '26686 patent" and that Matsunaga "does not disclose a lawnmower of any kind." POR, 14. *See* Ex.1003, ¶89 ("Matsunaga teaches a battery-powered electric lawn mowing device"); Petition, 42. Matsunaga is pertinent to the problems of the Challenged Patent because it is concerned with providing switches (*e.g.*, switch 11) that turn on/off switches lying in a power supply circuit between a battery and a motor in a mowing gardening tool. Ex.1006, Figure 2.

As determined by the Board, "Matsunaga is reasonably pertinent to the problem with which the ['26686] inventors were involved." Paper 21 (Institution Decision), 52.

B. Roelle Discloses the Locking Member Limitation.

POR argues that Roelle fails to disclose the claims "locking member" limitation of claims 1 and 11. POR, 17. PO admits Roelle "discloses a 'locking structure' that locks Roelle's handle at a non-use vertical position when the lawnmower is not in use." POR, 18. But PO hinges its argument exclusively on the incorrect construction of "accommodating position," *supra*. "But Roelle's non-use vertical position is not the claimed ***horizontal*** 'accommodating position.'" POR, 18 (original emphasis).

Roelle's vertical non-use position resembles the vertical non-use position afforded by slot 234 in the '26686 patent. Roelle meets the recited limitation.

C. Outils Discloses the "Second Control Device."

POR provides an excellent explanation of Outils' role in proving the challenged claims' unpatentability. POR, 19-23. Outils discloses a kill switch, in layman's terms, that stops and disables the ability to start the mower's blade motor when its push-handle is rotated upward, away from its in-use angle. The embodiment of Figure 1 uses something known as a Bowden cable that becomes slack when the handle is raised, thereby turning off the electric supply contactor associated with the user's on/off lever 30 (the claimed operation assembly; Petition 70). Ex.1014, 4-5.

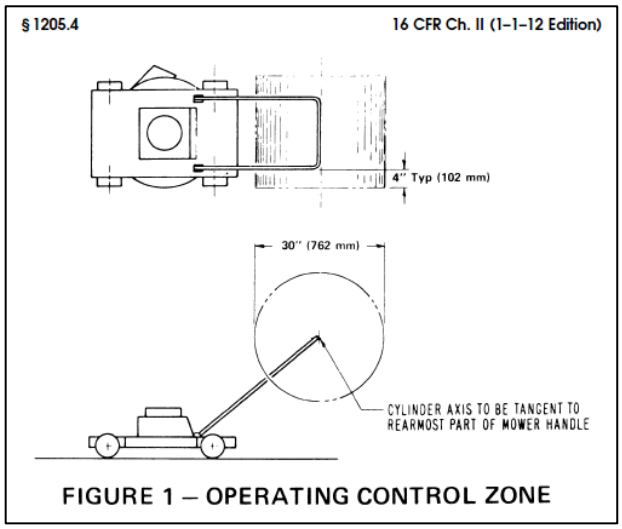
Outils' Figures 5-10 disclose *alternatives* to the Bowden cable. In Figure

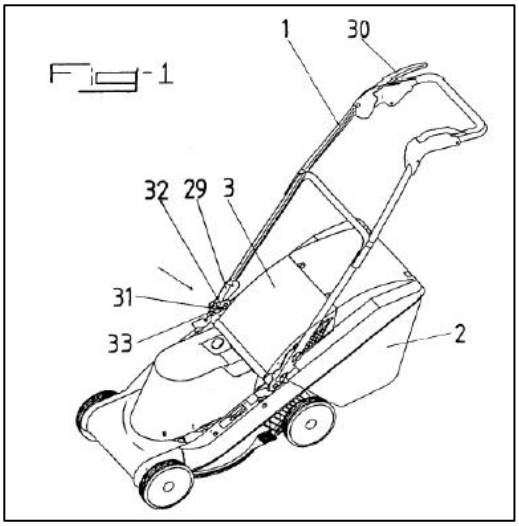
10[5], the embodiment relied upon in the Petition, the Bowden cable is replaced by actuator 23 that interacts with cam 24 in a manner identical to switch SW1 and cam 22 in Figures 7-8 of the Challenged Patent. "[A]ny forward tilting of the handlebar 1 results in action on the actuator 23 by means of the cam 24, and thus in the activation of the stoppage of the motor and/or the decoupling and braking of the cutting blade." Ex.1014, 8:27-29. But while the *Bowden cable* of Figure 1 is replaced in Figure 10, POSITA would understand Figure 10 must still include a user's on/off component even though none is illustrated. Even Mr. Smith admits that, although Outils does not explicitly describe how the user starts the motor of Figure 10, "Outils' lawnmower could have … a separate start switch". Ex.2027, ¶156. Never mind "could," POSITA would know that Outils ***must*** have a manual on/off component, and it must be atop Outils' handle 1 just like component 30 (Figure 1) with its own associated contactor because 16 CFR 1205.5(c) mandates it[6]: "Walk-behind mowers with blades that begin operation when the power source starts shall have their normal starting means located within the operating control

[5] Outils' specification is occasionally one-off from its figures, a typographical error noted in the Institution Decision (Paper 21), p.26.

[6] Mr. Smith, having no previous experience with 16 CFR 1205, overlooks the requirements of those regulations. Ex.1040, 42:23-43:8; 44:20-45:8.

zone unless the requirements of paragraphs (a)(1)(iv)(A) or (B) of this section apply to the mowers." Ex.1008, p.8; *see* 1205.3(10)(defining "Normal starting means") and 1205.3(11)("Operating control zone"). The user's on/off control must "[r]equire continuous contact with the control in order for the blade to continue to be driven" (1205.5(a)(2)), once again like Outils' hold-to-run component 30.





Ex.1008, Figure 1; Ex.1014 (Outils), Figure 1.

POSITA's understanding would also come from Outils' own explanation that his safety mechanism is intended to supplement the user's on/off control. "Although 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." Ex.1014, p.2:24-27. Thus, POSITA would have understood Outils' Figure 10 to include hold-to-run lever 30 (or comparable regulation-compliant component) and its electric supply contactor from Figure 1

but without cable 29 acting as a Bowden cable. *See* Ex.1003, ¶¶72, 74, 83, 86, 98, 103, 128; *see also* Petition, 33; Ex.1003, ¶74 (obvious to add an operation assembly to activate/deactivate the blade motor) (***unrebutted by POR***).

Last, POR argues that "Petitioner provides no evidence to show that the [Outils'] electrical supply contactor [associated with hold-to-run component 30] functions to start the motor." POR, 37. Petitioner does not understand the argument – no POSITA would interpret Outils' mower as ***not*** having a user's on/off contactor associated with lever 30 for the reasons set forth in the preceding paragraphs quoting 16 CFR 1205.

D. Motivation Existed to Combine the Prior Art References.

POR incorrectly contends that the Petition did not adequately explain why POSITA would have combined the prior art references. POR, 23-24. The Petition addressed each and every claim limitation, identifying motivation for each combination as well as multiple combinations, and explaining how each component in the prior art would be modified. That is precisely what is required to demonstrate obviousness.

E. Motivation Existed to Combine Outils and Roelle.

POR suggests that the Petition relied on generic, unconvincing "safety" arguments for combining Nakano with Outils and Langdon. POR, 24-25. For example, POR questions "why Outils' handle inadvertently rotating from a

non-use position to an in-use position would be 'dangerous'." POR, 25. Looking at Outils' Figure 10, it is clear Outils' handle could rock back to the in-use position, and Petitioner hardly thinks much analysis is needed to see that is not a desired situation. For the same reason that Outils does not rely on the user turning off the motor's on/off mechanism (lever 30 and its electric supply contactor), motivation exists for keeping the handle away from the in-use angle as the user clears cut-grass. Ex.2024, 2:24-27. An additional, clear danger is the possibility of the handle hitting the user as he/she leans over. PO's arguments have no merit.

POR cites an excerpt from Outils that "any risk of accidental injury by an object being projected or entering the active area of said cutting blade is avoided." POR, 26 (citing Ex.1014, 10:22-29). PO makes Petitioner's point – risk of injury in Outils is avoided *by keeping the handle away from its in-use position*, and Roelle's handle lock does precisely that.

POR continues with a surprising suggestion that POSITA would ***avoid*** adding safety features to a mower once it satisfies the letter of certain regulations or ANSI publications. POR, 26 (no reason "to add safety features to Outils beyond those required by the relevant lawnmower industry safety standards and regulations"). Luckily, Petitioner's expert Mr. Reed offers testimony from the point of view of POSITA, explaining how and why POSITA would have spotted safety issues and wanted to incorporate obvious fixes.

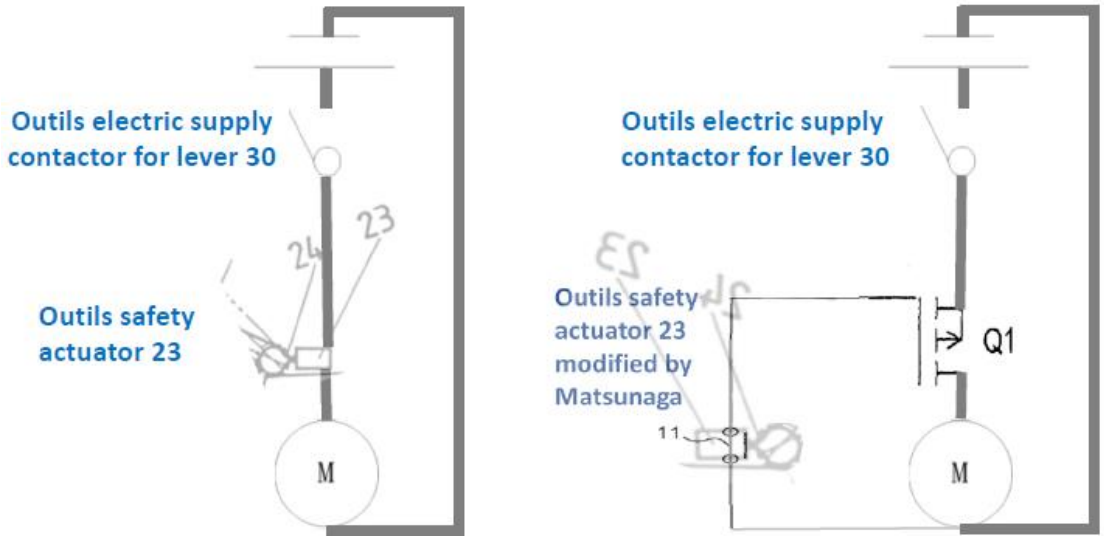
POR's "center of mass" argues that Outils' handle is weighted such that it would remain vertical as the user clears grass. POR, 27-28. PO ignores reality – mowers rest on uneven, sloping terrain and clearing grass requires the user to physically interact with the mower. Mr. Reed testified from the ***realistic*** point of view of POSITA that the handle could inadvertently rotate from its accommodating position (Ex.1003, ¶¶75-77; Petition, 33-35), providing motivation to lock the handle in place.

F. Combining Outils and Matsunaga Would Have Been Obvious.

POR contends the combination of Outils with Matsunaga would not have been obvious. POR, 29-33. This Reply already addressed, *supra*, POR's argument that Matsunaga is "irrelevant" to mowers such as Outils. POR, 28. POR's next argument is that, because Outils "does not have a semiconductor switch" as actuator 23 … "Matsunaga's teachings are irrelevant". POR, 29-30. PO misses the point. Matsunaga describes reasons to *replace* a contact switch located in a high-current path (such as Outils' actuator 23 (Figure 10)) with a low-current contact switch tethered to a semiconductor switch that lies in the high-current path.

The figure below illustrates Mr. Reed's explanation, ¶90, to "implement Outils' actuation activator 23 (a contact switch triggered by cam 24) as

Matsunaga's contact switch 11…."[7]



POR's argument that "POSITA considering Outils' semiconductor-less lawnmower would have had no reason to look to Matsunaga" (POR, 30) is inconsequential because motivation for using Matsunaga comes from Matsunaga's better, safer implementation of Outils' *contact* actuator 23. Moreover, Matsunaga says that semiconductor switches were, before its invention, *not* common (1:22-23), and thus Matsunaga's disclosure gave further motivation to move away from a high-power contact switch (like Outils' 23) to a combination low-power contact

[7] POSITA would have found it obvious to replace the contactor associated with Outils' lever 30 with Mastunaga's low-current switch 11 and high-power switch Q1 but this diagram focuses on Outils' actuator 23.

switch and high-power semiconductor switch. Despite POR's contentions regarding the purported *advantages* of high current passing through Matsunaga's prior art switches, Matsunaga's disclosure is all about the disadvantages of those designs and the advantages gained from its low-current switches. Ex.1006, 9:65-10:2 (improved weight, size, cost, safety); 1:47-48 (size, cost); 1:52 (same); 1:56-58 ("reliability of the tool can be improved *without* providing a contact switch having large contact capacity" (emphasis added)). And while POR complains of additional costs from adding a CPU, etc. (POR, 31), PO overlooks that Matsunaga uses only switch 11 and semiconductor Q1 (Figure 2).

Next is PO's argument that there is no "danger" in using high currents. POR, 31. PO overlooks the location of Outils' actuator 23 immediately adjacent the cut-grass chute where wet grass collects and where Outils' user's hands are expected to reach to clear grass. Ex.1014, Figure 10. The motivation to avoid high current and electrical shock hazards in that location is clear.

Last is PO's argument that the distance from Outils' motor to actuator 23 is too short to justify thin wires that Matsunaga's design permits. POR, 32. Distance is relative, of course, and Matsunaga's savings in weight, size, cost and safety are motivations that POR does not refute. Ex.1006, 9:65-10:2.

G. Outils-Roelle-Matsunaga Combination Would Have Been Successful.

POR complains that the Petition did not include specific *words* that this

combination would have been successful. POR, 33-34. Of course, those words are not required by statute or regulation. And "obviousness based on teachings from multiple references does not require an actual, physical substitution of elements." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012). What matters is "whether a person of ordinary skill in the art, having all the teachings of the references before him, is able to produce the structure defined by the claim." *Orthopedic Equip. Co., Inc. v. United States*, 702 F.2d 1005, 1013 (Fed. Cir. 1983). As part of the obviousness inquiry the fact-finder may, when the "technology is complex … look[] for specific evidence that a person of ordinary skill in the art would have reasonably expected success in combining" the references. *Samsung Electronics Co., Ltd. v. Elm 3DS Innovations, LLC*, 925 F.3d 1373, 1382 (Fed. Cir. 2019) (addressing substitutions in integrated circuit fabrication processes using flexible, low-tensile-stress dielectric material). Here, however, the claimed technology is far from complex and Petitioner has relied on detailed analyses from its expert, Mr. Reed, who testifies how the prior art would be combined by POSITA. Ex.1003. The Petition and Mr. Reed's testimony more than adequately demonstrate obviousness, including how POSITA would have had reasonable expectations of success for each prior art combination in each challenge.

V. GROUND 2.

A. Nakano is Analogous Art to the Challenged Patent.

PO incorrectly suggests Nakano is non-analogous art to the Challenged Patent. POR, 34-37. First, this Board's Institution Decision disagreed with PO's previous contention that Nakano was non-analogous art. Paper 21, 57-60. Second, Nakano's mowing device "for cutting grass or plants" (Ex.1015, 2; 31; *see* Petition, 54) is in the same technical field and addresses the same problem as the claimed "mower" or "gardening tool," namely safely cutting ground vegetation. *See Airbus S.A.S. v. Firepass Corp*., 941 F.3d 1374, 1379 (Fed. Cir. 2019) (a reference is analogous art if it is from the same field of endeavor or if it is reasonably pertinent to the particular problem with which the inventor is involved). Nakano's invention is also for carried (Figs. 1-2), wheeled (Fig. 16(4)) and even non-gardening tools (Ex.1015, 50-51) having a retracting rod/pole (*id*., 59). Nakano's safety telescoping mechanism (Ex.1015, 5, 10 (the rod might be "retracted due to a certain cause during bush cutting work"), 28, 59, etc.) resembles the Challenged Patent's, and Nakano's goal of safety and "reducing a storage space" for gardening tools (*id*., 4; Petition, 38) matches the Challenged Patent's. And to the extent Nakano is deemed *not* a lawnmower (it is, and the issue is irrelevant because the claims recite "gardening tool" or "mower," not "lawnmower"), PO's expert reinforced that Nakano's mower and other mowers are

analogous because they share the problem of (undesirably) encountering obstacles like tree trunks, rocks or fences.[8] POSITA would have been aware that such collisions occur, and would have been motivated to avoid any dangerous situation such collisions might cause. Moreover, Nakano's mower, like any other walk-behind mower, has its cutting blade positioned in front of the user so s/he can see what is being cut as s/he walks forward. Nakano is analogous art.

PO relies on Mr. Smith's contention that "lawnmowers are heavier than bush cutters and require a lot more power than bush cutters because they are used to cut a larger area." POR, 35 (citing Ex.2027, ¶89). But the claims do not recite weight or power limitations, and it is well known that gardening tools and mowers come in various sizes, weights, and power strengths. Mr. Smith's testimony that "POSITA designing a lawnmower would have had no reason to look to hand-held bush cutters" (Ex.2027, ¶89) is baseless and wrong. *Compare, e.g.*, Ex.1003, ¶61, 117-120.

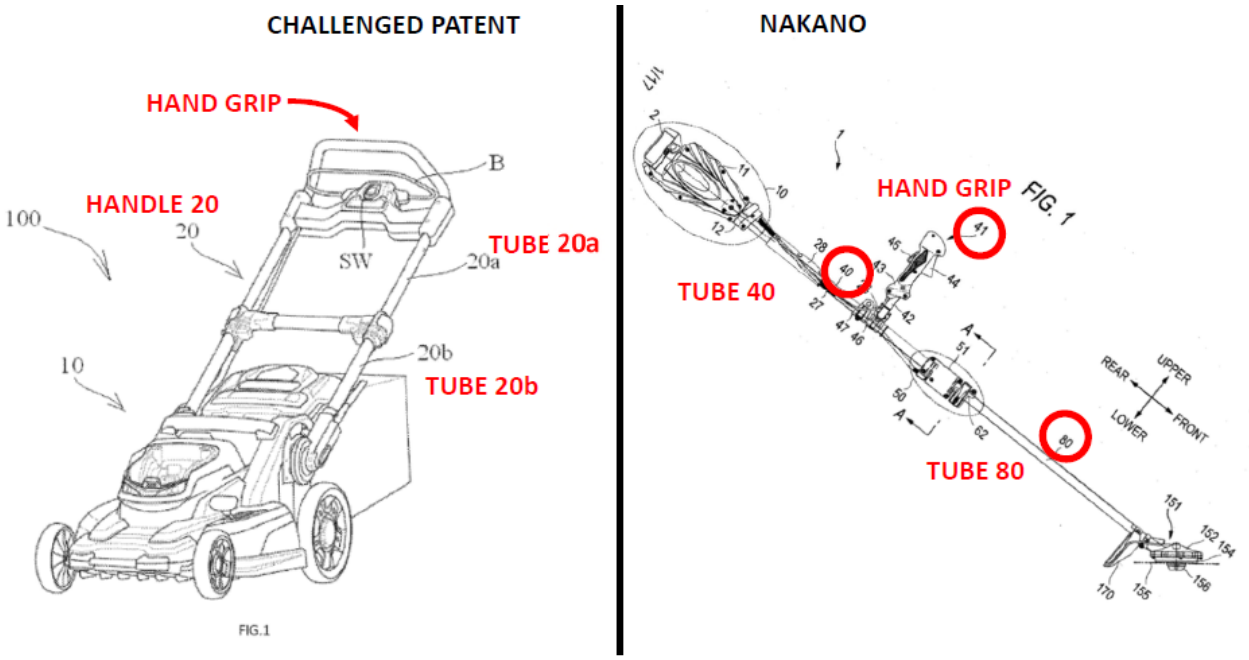
B. Nakano's Control Devices and "Handle".

POR, 37-38, argues that "Nakano ***does not disclose, teach, or suggest a***

[8] Ex.1040, 49:13-50:1. Nakano's gardening tool has wheeled and unwheeled embodiments (Ex.1015, Figures 1-2, 16(4)) that sufficiently resemble lawnmowers as well as weedwackers, however a person might envision such devices.

telescopic handle." POR, 38 (original emphasis). The argument has no merit. Much like the Challenged Patent's "handle 20" includes telescoping tubes 20A, 20B (which are clearly *not* held during normal use) joined to a horizontal hand-grip (which *is*), so, too, does Nakano disclose telescoping pipes 40, 80 joined to a hand-grip 41. PO's argument, distilled, is not that Nakano has no handle, it is that Nakano uses the word "handle" more narrowly than the Challenged Patent. PO's argument is one of claim construction. And the *intrinsic* evidence[9] – such as the Challenged Patent's description of handle 20 in Figure 1 (below) – demonstrates that the claimed "handle" encompasses Nakano's hand-grip 41 and pipes 40, 80. *See* Petition, 54-55.

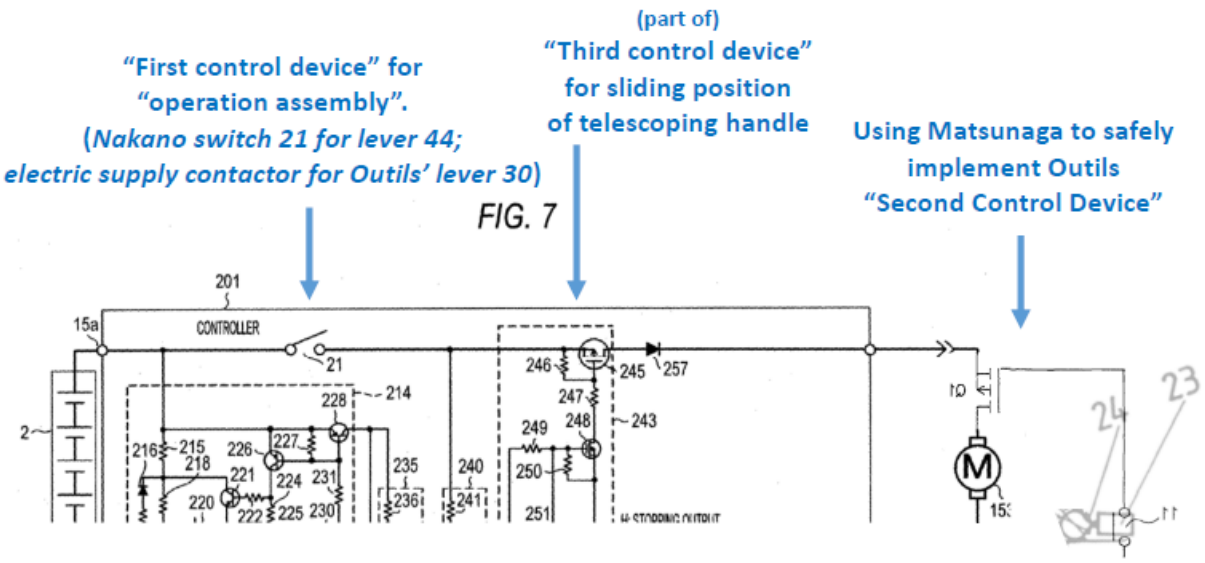
[9] When intrinsic evidence resolves claim construction, consideration of extrinsic evidence (here, Nakano's terminology) is inappropriate. *Digital Biometrics, Inc. v. Identix, Inc*., 149 F.3d 1335, 1344 (Fed. Cir. 1998).



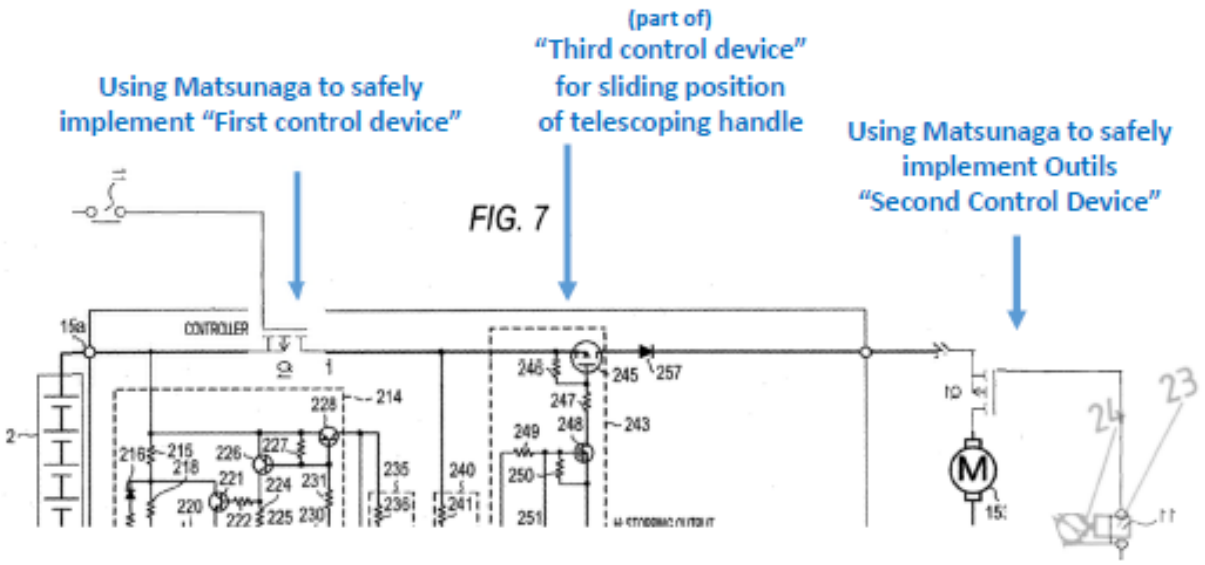
POR incorrectly contends that the Petition did not state that Nakano's control devices would lock/unlock (disable/enable) the claimed "operation assembly" when combined with other references. POR, 39-40 (citing Petition, 54-64). The Petition explicitly stated "Nakano adds several control devices that meet this Challenged Claim: among them is switch 55, Hall IC 56, and control circuit 12 or microcomputer 211, each of which enables/disables (i.e., the claimed actions of "unlocks" and "locks") the user's operation assembly, i.e., trigger lever 44, from activating the motor that controls cutting blade 155. The operation assembly is unlocked when it and tube 40 extend to a designated in-use position, and locked when it and tube 40 slide (retract) away from that position toward the main body containing the blade." Petition, 57. "Activating," of course, is the action of switch 21 tethered to trigger 41 (Figures 7, 11). The Petition identifies Nakano's switch

55 as the "third control device" (Petition, 58) and "the motor is activated only when both trigger 44/21 and switch 55 permit power to reach the motor. …TTI1003, ¶122." Petition, 59-60. Hall IC 56 is another "third control device" (Petition, 61) and, based on the telescopic pipes' relative position, "the output from the output stop circuit 243 is stopped, thereby stopping supplying of an electric power to the motor 153. … Accordingly, supplying of an electric power to the motor 15 is surely stopped with the rod has been retracted from the extended state or is retracted during operation." Petition, 62. Without power passing through stop circuit 243, switch 21 (the first control device) is ineffective; *see* Figures 7, 11. Microcomputer 211, another "third control device," acts to "enable or disable activation of the motor by the user-operation operational assembly.' … 'The output stop circuit 243 is a circuit for forcibly stopping rotation of the motor 153 under the control of the microcomputer 211, even with the switch 21 is turned on.' … As a result, the motor 153 is not rotated even if the switch 21 is pulled." Petition, 63-64. POR's argument has no merit.

The narrative in the Petition, pp.51-67, describes this circuit as the obvious result of combining the non-complex circuitry taught by Nakano into Ground 2:



Ex.1015 (Figure 7; similar annotations can be made to Fig. 11).



Id. (similar annotations can be made to Fig. 11).

C. Outils-Roelle-Matsunaga-Langdon-Nakano Combination Was Obvious and Would Have Been Successful.

POR incorrectly contends that the Petition did not adequately explain why POSITA would have combined the prior art references. POR, 40. The Petition

addressed each and every claim limitation, identifying motivation for each combination as well as multiple combinations, and explaining how each component in the prior art would be modified. That is precisely what is required to demonstrate obviousness. *See supra*, IV.D., IV.G.

D. Motivation Existed to Combine Outils with Langdon.

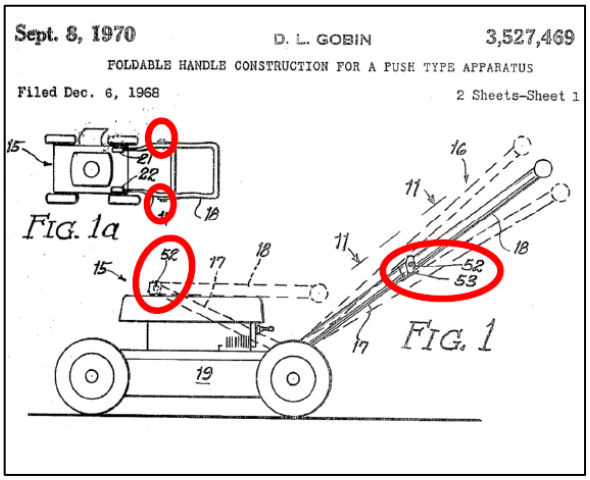
POR contends no motivation existed to combine Outils with Langdon. POR, 40-45. Petitioner's expert Mr. Reed testified, however, that POSITA would have been motivated by Outils' large profile to make it smaller for shipping, storage and non-use. Petition, 52-54; Ex.1003, ¶¶112-115. Even PO takes the position that POSITA would want Outils' handle smaller (POR, 44-45), but as demonstrated below, telescoping Outils' handle was obvious while folding it was not. POR reinforces that POSITA would have been motivated to collapse Outils' handle as taught by Landon.

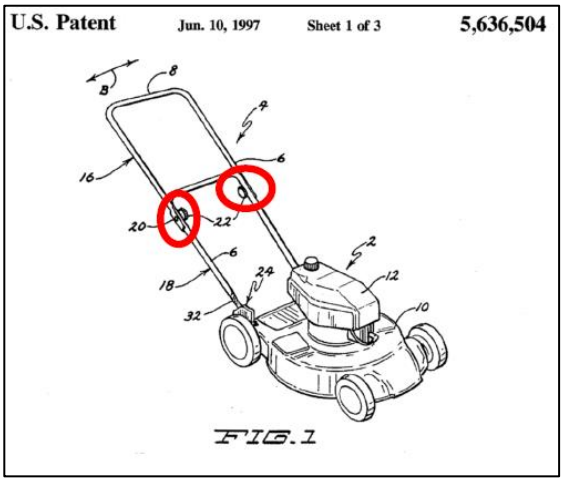
POR incorrectly suggests Outils' mower would have included *redundant* components, namely a Bowden cable (Figure 1) and the cam-and-actuator arrangement (Figure 10). POR, 41-42. As explained *supra* IV.C., Outils' cam-

and-actuator *substitute* for the Bowden cable[10] and POR offers no reason why POSITA would have used both together.

POR questions whether Outils' cable 29 would kink and break. POR, 43. But prior art such as Reichart and Nakano use electrical wires in telescoping tubes without issue, so this argument is refuted by POSITA's knowledge that such cables were known to work in telescoping handles.

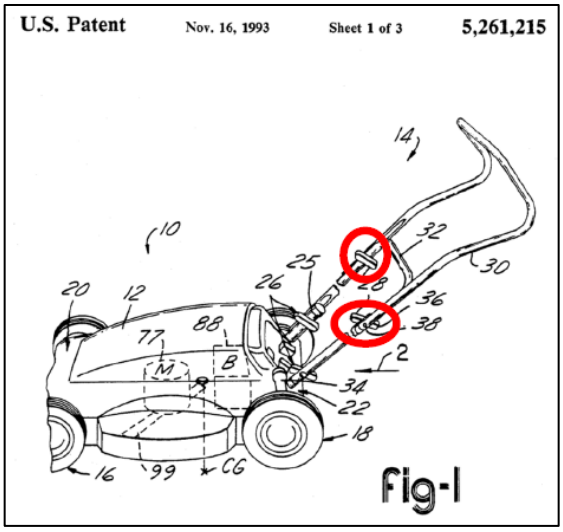
POR suggests Outils' handle was already designed to fold. POR, 43-45. The argument fails. First, POR submitted four exhibits (Ex.2030-2033) whose handles fold thanks to hand-loosened knobs; Outils has ***no such knobs***:

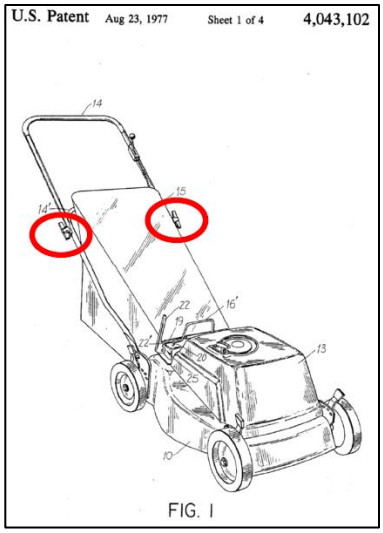




Exs.2030, 2031 (annotated).

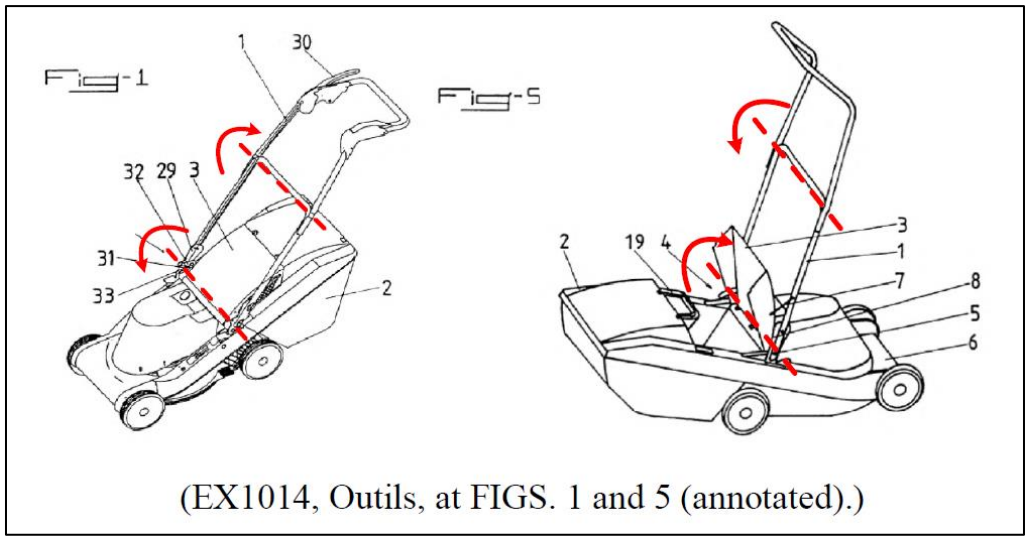
[10] As explained, *supra*, the Petition identified a cable associated with lever 30 to trip the associated on/off contactor, but not for use as a Bowden cable because Figure 10 instead uses cam 24 and actuator 23.





Exs.2032, 2033 (annotated).

Second, the four references' handle pieces are physically complementary for folding. Three have straight/planar handles (Exs. 2030-2031, 2033) and the fourth's hand-grip is shaped to avoid the mower's motor and create a stand (Ex.2032, Figures 3-4). Outils uses an elbow that angles the handle *toward the user*. POR offers these annotations:

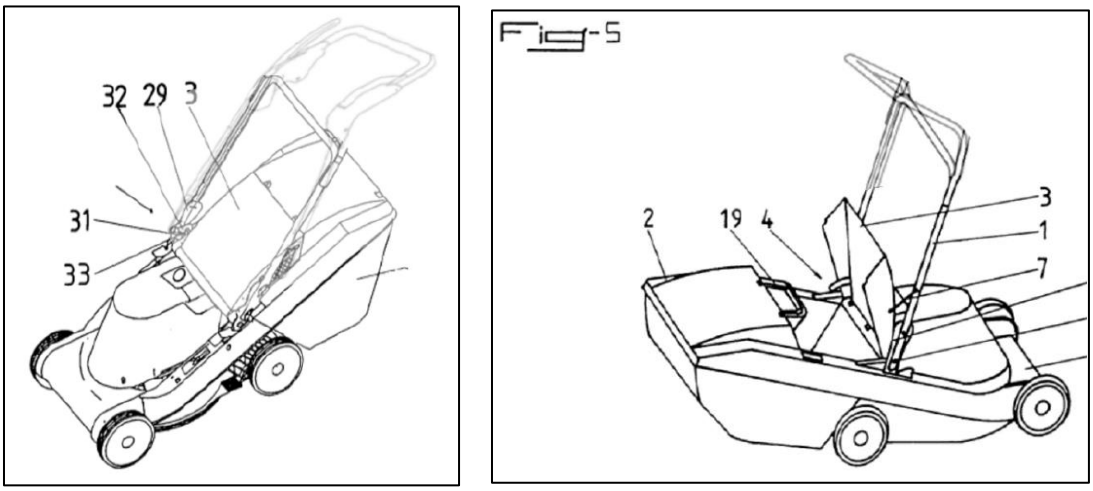


(EX1014, Outils, at FIGS. 1 and 5 (annotated).)

But Outils' elbow would cause the hand-grip to collide with the motor

and/or cover 3. That would be undesirable, and highlights why Outils does not fold.

Using Langdon's telescoping feature, however, allows Outils' handle to telescopically retract and rotate without interference:



Ex.1014, Figures 1, 5 (annotated).

POSITA would have been motivated to *telescope* Outils' handle for shipping and storage as established in the Petition (pp.52-54).

E. Combining Outils and Nakano Would Have Been Obvious.

POR, pp.45-51, presents the precise reasons why POSITA would have been motivated to combine Outils' modified (telescoping) handle with Nakano's safety devices. First, POR incorrectly argues that Nakano has no "handle" (POR, 46-47) an issue that was addressed, *supra*. Second, even PO's expert acknowledged that, in use, mowing tools encounter obstacles like tree trunks. *Supra*, n.5. Nakano's invention is a safety device for carried (Figs. 1-2), wheeled (Fig. 16(4)) and even

non-gardening tools (*id*., 50-51) having a retracting rod/pole (*id*., 59). And consistent with PO's expert's testimony, Nakano's safety telescoping mechanism addresses not only convenient storage (one of the motivations to make Outils' handle telescoping, *see supra*) but also unsafe retraction of a telescoping handle during use (Ex.1015, 5, 10 (the rod might be "retracted due to a certain cause during bush cutting work"), 28, 59, etc.). Each of these goals resembles the Challenged Patent's. In view of each of these motivating factors, Mr. Reed testified that POSITA would have found the combination of Nakano with Outils' modified (telescoping) handle to be obvious.

POR continues by repeating its surprising suggestion that POSITA would ***avoid*** adding safety features to a mower once it satisfies the letter of certain regulations or ANSI publications. POR, 47-48 (no reason "to add safety features to Outils ***beyond*** those required by the relevant lawnmower industry safety standards and regulations")(original emphasis). Luckily, Petitioner's expert Mr. Reed offers testimony from the point of view of POSITA, explaining how and why POSITA would have spotted safety issues and wanted to incorporate obvious fixes.

POR next suggests no "safety" advantage is gained by the combination based on PO's incorrect suggestion (addressed, *supra*) that Outils' mower would have included *redundant* components from its Figure 1 and Figure 10 embodiments, namely a Bowden cable together with the cam-and-actuator

arrangement of Figure 10. POR, 48-49. *See* Petitioner's rebuttal, *supra*.

Finally, POR suggests a lack of motivation for combining Nakano with Outils' modified (telescoping) handle. But Mr. Reed specifically explained the motivation that Nakano's telescoping handle shares Langdon's goal of creating a compact device for storage "***but provides added safety*** where, 'if retraction of a rod [i.e., collapse of the telescoping handle] 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***.'" Ex.1003, ¶117 (emphasis added); Petition, 54-55.

F. Outils-Roelle-Matsunaga-Langdon-Nakano Combination Was Obvious and Would Have Been Successful.

POR complains that the Petition did not include specific *words* that the Reichart-Nakano combination would have been successful. POR, 51. This issue was addressed, *supra*, and applies equally to this combination of references.

VI. REAL PARTIES IN INTEREST.

The parties have already briefed issues surrounding real parties-in-interest, and POR repeats PO's earlier arguments.[11] *See* Paper 16. Petitioner incorporates

[11] PO apparently abandoned its RPI arguments relating to Techtronic Industries North America, Inc., and limits its arguments to Techtronic Industries Co. Ltd., and Homelite Consumer Products, Inc. POR, 2, 52.

by reference herein its arguments from Papers 13 and 18. Among the arguments POR repeats is its still-unsupported allegation that another entity such as Techtronic Industries Co. Ltd. "controls, or at least has the opportunity to control, Petitioner." POR, 52-53. Petitioner's president Mr. Sowell's declaration and deposition testimony confirmed that *none* of the entities identified in Petitioner's Motion to Update Real Parties-In-Interest (Paper 13) exercises control over Petitioner. Ex.1036, ¶¶3-4; Ex.1039, 27:13-28:1; 34:22-36:2; 36:4-37:22. None of those entities is "an involved and controlling parent corporation" and thus not an RPI. *ZOLL Lifecor Corp. v. Philips Elec. N. Am. Corp.*, IPR 2013-00606, Paper 13, at 10 (PTAB Mar. 20, 2014). As for PO's allegations that other entities would benefit from the Challenged Patent's unpatentability, Petitioner's earlier papers address the issue. At bottom, however, is the irrefutable fact that none of the other entities – Techtronic Industries North America, Inc., Techtronic Industries Co. Ltd., or Homelite Consumer Products – previously attempted to challenge the patent at issue in a prior AIA proceeding such that the present proceeding would be time-barred under § 315. *See Applications in Internet Time, LLC v. RPX Corp*., 897 F.3d 1336 (Fed. Cir. 2018) (evaluating RPI in the context of the time-bar under 35 U.S.C. § 315). Accordingly, if the Board exercises its discretion to grant Petitioner's Motion (Paper 13), this proceeding would not be time-barred. *Elekta, Inc. v. Varian Med. Sys., Inc.*, IPR 2015-01401, Paper 19, 8 (PTAB Dec. 31, 2015)

("Section [37 C.F.R. §] 42.106 does not foreclose the Board's discretion to maintain a petition's original filing date when a party amends its RPI disclosures because, under § 42.5(b), '[t]he Board may waive or suspend' § 42.106's filing date provisions."); *see also Lumentum Holdings, Inc. v. Capella Photonics, Inc.*, IPR2015-00739, Paper 38, 4-5 (PTAB Mar. 4, 2016) (precedential).

VII. CONCLUSION

A finding of unpatentability is respectfully requested.

Respectfully submitted,

Dated: May 14, 2021

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Attorney for Petitioner

CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter partes* Review totals 5,492 words, which is less than the 5,600 allowed under 37 CFR § 42.24(c)(1).

Respectfully submitted,

Dated: May 14, 2021

/Edward H. Sikorski/
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Attorney for Petitioner

CERTIFICATE OF SERVICE

The undersigned certifies service pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b) on the Patent Owner by electronic copy of this **PETITIONER'S REPLY** and supporting materials.

Service is made electronically upon agreement of the parties.

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