

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHARKNINJA, INC., SHARKNINJA OPERATING LLC,
SHARKNINJA MANAGEMENT LLC, AND
SHARKNINJA SALES COMPANY,
Petitioners,

v.

DYSON TECHNOLOGY LIMITED,
Patent Owner.

Case No. IPR2024-00219
U.S. Patent No. 11,589,660

**SUPPLEMENTAL DECLARATION OF DR. DANIEL M. NOSENCHUCK
IN SUPPORT OF PETITIONER'S OPPOSITION TO PATENT OWNER'S
MOTION TO AMEND UNDER 37 C.F.R. § 42.121**

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TABLE OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 11,589,660
1002	File History for U.S. Patent No. 11,589,660
1003	Declaration of Dr. Nosenchuck
1004	U.S. Patent No. 4,943,182 (“Hoblingre”)
1005	Certified Translation of European Patent Application No. EP0791758 (“Mouhot”)
1006	European Patent Application No. EP0791758 (“Mouhot”)
1007	U.S. Patent Application Publication No. 2015/0265022 (“MacLaine”)
1008	U.S. Patent No. 6,161,244 (“Jeannet”)
1009	U.S. Patent No. 5,715,847 (“Rolf”)
1010	U.S. Patent No. 7,876,373 (“Ochi”)
1011	Redline of Proposed Corrections to Petition
1012	October 3, 2024 Deposition Transcript of Mr. Joel Delman
1013	Supplemental Declaration of Dr. Daniel M. Nosenchuck
1014	U.S. Patent Application Publication No. 2015/0297045 (“Marsh”)
1015	U.K. Patent Application No. GB2513561 (“Brook”)

I, Dr. Daniel M. Nosenchuck, hereby declare as follows:

I. INTRODUCTION AND QUALIFICATIONS

1. I understand that the Patent Trial and Appeal Board (“PTAB” or “Board”) instituted an *inter partes* review (“IPR”) of U.S. Patent No. 11,589,660 (“the ’660 patent”) (Ex. 1001) and that the Patent Owner, Dyson Technology Limited, has filed a contingent motion to amend challenged claims 1-9, 15, 18, 24 and 30-34 of the ’660 patent to be replaced by substitute claims 40-56. I have been asked to offer opinions regarding the patentability of the proposed substitute claims 40-56.

2. I am not, and never have been, an employee of any of the Petitioners in this IPR. I received no compensation for this Declaration beyond my normal hourly compensation based on my time actually spent on the assignment described above, and I will not receive any added compensation based on the outcome of any IPR or other proceeding involving the ’660 patent.

3. My qualifications and experience to provide the opinions in this Declaration were previously provided in the first declaration I prepared in support of the Petition in this IPR and are incorporated by reference here.

4. My understandings of the legal principles as outlined in the first Declaration that I prepared in support of the Petition in this IPR have not changed and are incorporated by reference here.

5. My identification of the relevant field of art and the definition of a person of ordinary skill in the art (“POSITA”) in that field were set forth in my first Declaration and are incorporated by reference here. My analysis of the proposed substitute claims in this Declaration uses that same definition of a POSITA.

6. My analysis in this Declaration is also based on my understanding of the state of the art that would have been known to a POSITA around September 1, 2016, as set forth in my prior declaration, which are herein incorporated by reference.

II. MATERIALS CONSIDERED

7. I have considered information from various sources in forming my opinions. I have drawn on my decades of experience in this field. I have employed methods and analyses of a type reasonably relied upon by experts in my field in forming opinions or inferences on the subject. Additionally, in preparing this Declaration, I have relied upon the exhibits listed at the beginning of this Declaration and any documents and other information cited in this Declaration. I have also reviewed Patent Owner’s Response and Patent Owner’s Contingent Motion to Amend, including a Declaration provided by Mr. Delman.

III. OVERVIEW OF CONCLUSIONS

8. It is my opinion that the proposed substitute claims are unpatentable for the following several reasons.

9. First, the proposed substitute claims are not supported by written description in the patent. All proposed claims introduce elements requiring that the body's attachment mechanism include a second slot, and the attachment include a second protrusion to engage with the second slot and that the actuator "interacts with only one of the first and second protrusions." *See* Contingent Motion to Amend, 4. The patent specification does not convey or suggest the "actuator interacts with only one of the first and second protrusions."

10. Second, the proposed claims are indefinite because they do not inform a POSITA about the scope of the invention with reasonable certainty. Given the limited, if any, disclosure from the patent specification and intrinsic record supporting the proposed substitute claims, a POSITA would not know how to determine what "interacts with" or "only one of" mean in the "actuator interacts with only one of the first and second protrusions" limitation.

11. Finally, the proposed substitute claims are invalid over prior art, specifically newly added Grounds 7-12: Hoblingre in view of Marsh alone or with Brook (indicated herein as "Marsh/Marsh+Brook") (or Marsh/Marsh+Brook in view of Hoblingre) (New Ground 7), Mouhot in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot) (New Ground 10), Hoblingre/Maclaine in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Hoblingre/Maclaine) (New Ground 8), Mouhot/Maclaine in view of

Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot/Maclaine) (New Ground 11), Hoblingre/Maclaine/Jeanne in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Hoblingre/Maclaine/Jeanne) (New Ground 9), and Mouhot/Maclaine/Jeanne in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot/Maclaine/Jeanne) (New Ground 12).

IV. SUMMARY OF THE PROPOSED AMENDMENTS

12. The proposed substitute claims are set forth below and for convenience, I am including the corresponding original claim to the proposed contingent substitute claim from the Dyson Contingent Motion to Amend:

Original '660 Patent Challenged Claim	Contingent Substitute Claim
1	40
2	41
3	42
4	43
5	44
6	45
7	46
8	47
9	48
15	49
18	50
24	51
30	52
31	53
32	54
33	55
34	56

Contingent Claim 40

A handheld appliance having a body and an attachment, the body comprising an attachment mechanism having a first slot, a second slot, and an actuator, the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot, wherein the actuator interacts with only one of the first and second protrusions and has a first position and a second position and the actuator is slidably moved from the first position towards the second position in a longitudinal direction of the body as the first protrusion engages with the first slot; wherein the body extends along a longitudinal axis and the first slot extends both radially around and axially along the body.

Contingent Claim 41

The appliance of claim 40, wherein in the first position, the actuator at least partially obscures the first slot.

Contingent Claim 42

The appliance of claim 40, wherein the actuator comprises a surface which interacts with the first protrusion when the first protrusion engages with the first slot.

Contingent Claim 43

The appliance of claim 42, wherein the surface is configured to at least partially define the first slot at or near the second position.

Contingent Claim 44

The appliance of claim 42, wherein the first protrusion comprises a first face for engagement with the actuator.

Contingent Claim 45

The appliance of claim 44, wherein the first face engages with the surface of the actuator.

Contingent Claim 46

The appliance of claim 40, wherein when the first protrusion is at a predetermined position within the first slot, the actuator returns towards the first position.

Contingent Claim 47

The appliance of claim 46, wherein the actuator retains the attachment on the body.

Contingent Claim 48

The appliance of claim 40, wherein the actuator is biased into the first position.

Contingent Claim 49

The appliance of claim 40, wherein the body has a first end and a second end, and the attachment mechanism is adjacent to the second end.

Contingent Claim 50

The appliance of claim 40, wherein the attachment comprises a collar extending around the attachment and the first protrusion extends from the collar.

Contingent Claim 51

The appliance of claim 40, wherein the second protrusion and second slot are radially spaced from the first protrusion and the first slot.

Contingent Claim 52

The appliance of claim 40, wherein the appliance is a hair care appliance.

Contingent Claim 53

The appliance of claim 52, wherein the hair care appliance is a hot styling appliance.

Contingent Claim 54

The appliance of claim 40, wherein the first slot causes the attachment to pivot relative to the body as the first protrusion engages with the first slot.

Contingent Claim 55

A handheld appliance having a body and an attachment, the body comprising an attachment mechanism having a first slot, a second slot, and an actuator, the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot, wherein the actuator interacts with only one of the first and second protrusions and has a first position and a second position and the actuator is slidably moved from the first position towards the second position in a longitudinal direction of the body as the first protrusion engages with the first slot, further comprising a user operated button which engages with the actuator.

Contingent Claim 56

The appliance of claim 55, wherein actuation of the button moves the actuator from the first position to the second position to facilitate removal of an attachment from the body.

13. The Patent Owner in its Motion to Amend summarized the proposed substitute claims as adding (1) “a second slot,” (2) “second protrusion to engage with the second slot,” and (3) “wherein the actuator interacts with only one of the first and second protrusions.” Contingent Motion to Amend, 4

V. ANALYSIS OF PROPOSED AMENDMENTS

14. It is my opinion that the proposed substitute claims are invalid on several bases. Below is a detailed analysis of the proposed substitute claims and these bases of invalidity.

A. The Proposed Substitute Claims Lack Written Description

15. It is my opinion that the proposed amendments do not have written description support in the '660 patent. Specifically, the proposed amended claims introduce a new claim element that the patent fails to reasonably convey to a POSITA: "the actuator interacts with only one of the first and second protrusions." Contingent Motion to Amend at 4.

16. I understand that the written description requirement is satisfied if a POSITA reading the original patent application would have recognized that the inventor(s) actually possessed by the filing date of the original application the full scope of the claimed invention as it is claimed. I understand that in deciding whether a claim satisfies the written description requirement, the description is considered from the viewpoint of a POSITA when the original application was filed. I have been informed that a disclosure in an application that merely renders the later-claimed invention obvious is not sufficient to meet the written description requirement; the disclosure must describe the claimed invention with all its limitations. An application must describe the invention in sufficient detail so that a

POSITA can conclude that the inventor invented the claimed invention. I have also been informed that one single coincidental disclosure may not be sufficient written description for a claim with an extrapolated limitation covering multiple embodiments. This has been explained to me as being a “genus” claim. It is my understanding that a sufficient description of a “genus” requires the disclosure of either *a representative number of species* falling within the scope of the genus or *structural features common to the members* of the genus so that a POSITA can visualize or recognize the members of the genus.

17. There is no written description support in the '660 patent for the “actuator interacts with only one of the first and second protrusions” element.

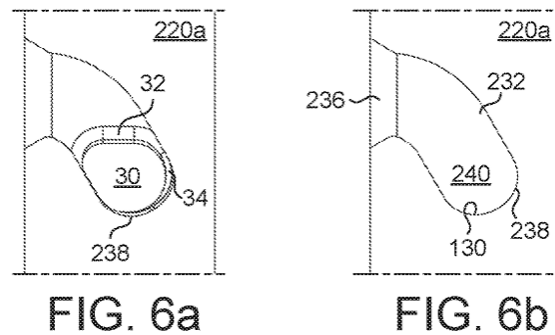
18. I have reviewed the '660 patent and do not see any text that describes an actuator that “interacts with only one of the first and second protrusions.”

19. Patent Owner cites paragraphs 66 and 67 of the application from which the '660 patent issued in support of its amendment and proposes comparing “the description of slots 232 to slot 232a.” Contingent Motion to Amend, 6 (citing Ex1002, 335). Those paragraphs discuss “slots 232” and “a slot 232a.” Ex1002, 335. They do not discuss an actuator that “interacts with only one of the first and second protrusions,” or even an “interaction” with a protrusion. When I review the specification from the perspective of a POSITA, I do not see mention of what the slots 232 and the slots 232a are relative to each other, whether the slots 232 and the

slots 232a are found together or are mutually exclusive in any given embodiment, whether a slot 232 does not or cannot include an actuator, how the different descriptions of the slots 232 and the slots 232a relate to whether an actuator interacts with only one of a first and a second protrusion, or any details that may indicate to a POSITA that the inventor contemplated an actuator that “interacts with only one of the first and second protrusions.” In fact, contrary to Patent Owner’s suggestion, the specification states that “[t]he protrusions 30, once they are pushed passed the third region 154 of the first part 52 of the actuator 50 are automatically pushed towards the recess 240.” Ex1001, 8:3–7.

20. The Patent Owner then draws a comparison between Figs. 1a-1b and Figs 5-6b. Patent Owner alleges that Fig. 5 discloses (a) one slot and one protrusion at the top interacting with an actuator and (b) a slot in the center, allegedly enlarged in Figs. 6a and 6b, that does not interact with an actuator and does not include an aperture for the actuator to slide into slot 232. Patent Owner then alleges that Figs. 1a and 1b include an aperture for the actuator to slide into slot 232a. Contingent Motion to Amend, 10. But that description is not in the specification, and I do not agree with the alleged inference. The specification appears to contradict the figures and Patent Owner’s contention, stating that “[t]he protrusions 30, once they are pushed passed the third region 154 of the first part 52 of the actuator 50 **are automatically pushed towards the recess 240.**” Ex1001,

8:3–7. The specification consistently and only describes this recess as being “defined by a wall 130 of the slot 232a.” Ex1001, 6:61-67, 7:9-12, 7:25-33, 7:42-50, 8:3-7. As shown below, however, recess 240 appears in Figs. 6a and 6b, which Patent Owner asserts depicts slot 232 and “fail[s] to disclose an aperture for the actuator to slide into.” Contingent Motion to Amend, 6.



Ex1001, Figs. 6a and 6b.

21. When I review Figs. 6a and 6b, together with the specification’s statement that “[t]he protrusions 30, once they are pushed passed the third region 154 of the first part 52 of the actuator 50 are automatically pushed towards the recess 240,” the specification suggests to me that the actuator 50 interacts with each of the protrusions 30, and I do not see the distinction that Patent Owner alleges is drawn between slots 232 and slots 232a. I also do not see any other examples cited by Patent Owner that indicate that the figures it identifies are representative of its invention.

22. In summary, a POSITA would not be able to understand that the Applicant had possession of the claimed invention, specifically, with an “actuator that interacts with only one of the first and second protrusions.”

B. The Proposed Substitute Claims Are Indefinite

23. It is my opinion that the proposed amended claims are indefinite. The amendments make the claims inherently self-contradictory, such that a person of ordinary skill would not be able to determine, with any reasonable clarity, the scope of the amended claims. It is not clear to a POSITA what kind of appliances would infringe the Contingent Claims.

24. I understand that, in order to be valid, the claims of a patent must be sufficiently definite that one skilled in the art can determine the precise limits of the claimed invention. I understand that patent claims are invalid as indefinite 35 U.S.C. § 112, ¶ 2, if the claims, read in light of the patent’s specification delineating the patent, and prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. I understand that a patent claim must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.

25. The Contingent Claims introduce the phrasing that the “actuator interacts with only one of the first and second protrusions”—a phrase that is not used in the ’660 patent as discussed above. In order for a POSITA to determine if a

product meets this limitation, it is unclear what the term “interacts with” means in this context and the ’660 patent does not provide any meaningful information. The phrase “interacts” is used a few times in the ’660 patent specification, but there is no explanation. In the summary the specification states: “the actuator comprises a surface which interacts with the protrusion when the protrusion engages with the slot.” Ex1001, 1:48-50.

26. It is also not clear whether the “only one of” phrase means that the actuator interacts with only one protrusion or whether it means that it interacts with only one of the two protrusions identified. For example, in a system with three protrusions, does the claim cover a system where the actuator interacts with only one of the three or does it cover where the actuator interacts with the first and third protrusion (where the first and second are the claimed first and second protrusions). The claim language also does not make clear whether the actuator causes the release of both protrusions, whether that means that the actuator has interacted with both protrusions.

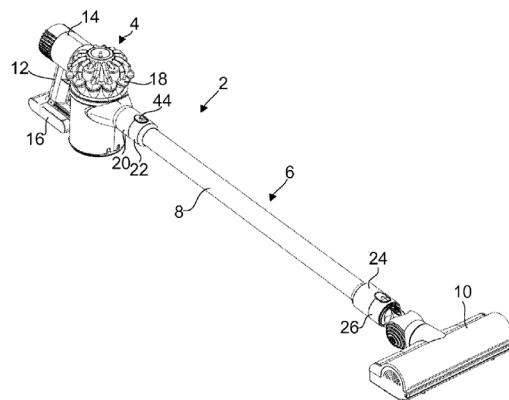
27. Therefore, the lack of clarifying disclosure from the specification renders the proposed substitute claims indefinite.

C. Prior Art Invalidity

28. The proposed substitute claims do not introduce any inventive concepts and, in my opinion, would have been invalidated based on at least Grounds 7-12 of invalidity discussed below.

29. The proposed amendments introduce the idea of an actuator that is limited to interacting with just one of many points of contact. This idea would have been well known and obvious to a POSITA as of the priority date of the '660 patent.

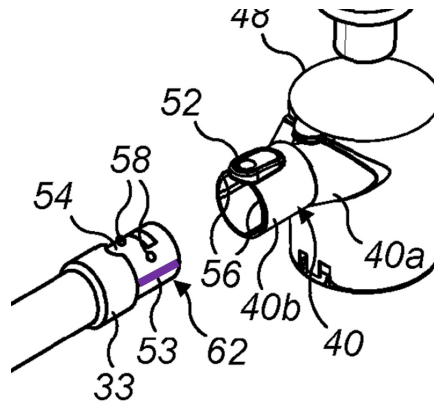
30. Just one example of an implementation of such an actuator appears in U.S. Patent Application Publication No. 2015/0297045 ("Marsh"). Marsh discloses a handheld appliance (such as a vacuum cleaner) having a "connector for connecting [a] cleaning implement to a vacuum cleaner." Ex1014, Abstract, [0022] ("vacuum cleaning apparatus 2 comprising a handheld vacuum cleaner 4 and a cleaning implement 6 comprising a tubular wand 8 and a cleaner head 10").



Ex1014, Fig. 1.

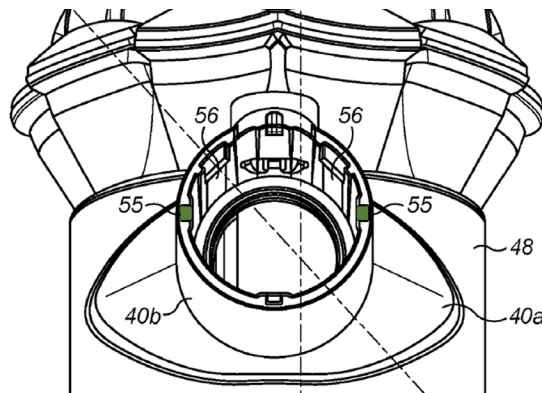
31. Marsh's handheld appliance (a vacuum cleaning apparatus) includes a body (handheld vacuum cleaner 4) and an attachment (cleaning implement 6, including wand 8 and cleaner head 10). Marsh's connector 20 includes two keyways (annotated in green) that receive two ribs (annotated in purple) on connector 22. Although Marsh does not label its keyways and ribs with reference numbers, in my opinion, a POSITA reviewing the figures would have recognized the ribs and the keyways as explicitly disclosed components that engage with each other to ensure that the wand aligns with the vacuum cleaner correctly and securely.

32. That is particularly true in light of U.K. Patent Application No. GB2513561 ("Brook"). Ex1015. Brook was published on November 2014 and claims priority to U.K. Application 1307415.8, filed on April 24, 2013 and is therefore prior art. Brook lists a common inventor with Marsh (Daniel James Brook), shares a common assignee (Dyson Technology Limited), and shares figures that are very similar. Brook explicitly describes the structures shown in Marsh to be ribs and keyways and explains why they are used to provide stability to the attachment when inserted into the tool. Ex1015, 7:30-8:2. Brook explains that a "pair of ribs 53" (annotated below in purple) is provided with "one on either side" of the external surface of a connector. Ex1015, 7:30-8:2.



Ex1015, Fig. 4b (excerpt, annotated).

33. The ribs 53 are “engageable with a corresponding keyway 55” by slotting inside of the keyways 55 (annotated below in green) on the other side of the connector. Ex1015, 7:30-8:2.

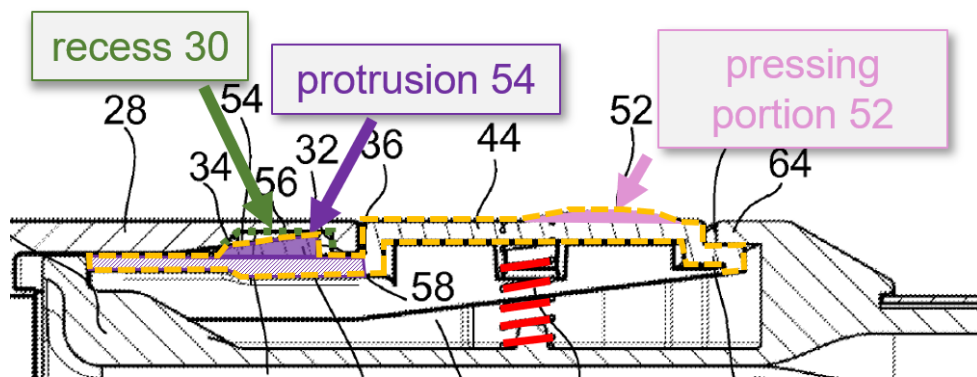


Ex1015, Fig. 5 (excerpt, annotated).

34. Brook emphasizes that “[t]his fitment between the ribs 53 and keyway 55 ensure that the wand connector aligns with the inlet nozzle 40 correctly and securely.” Ex1015, 7:30-8:2. Thus, in my opinion, a POSITA would have understood, based on Brook’s explicit description of ribs 53, keyways 55, and their

function and implementation, that the components depicted in Marsh's figures are ribs and keyways that have similar functions.

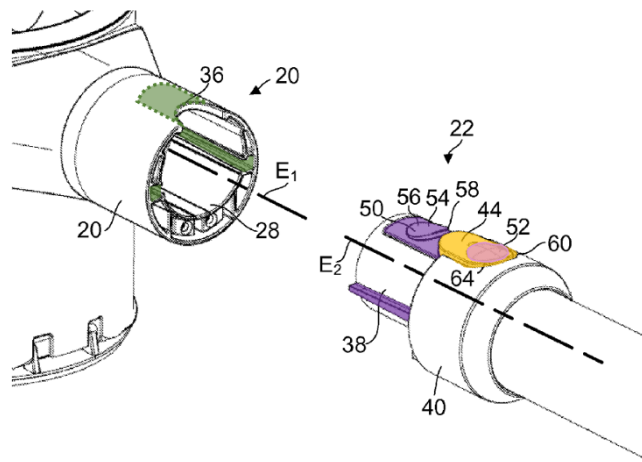
35. Marsh's connection mechanism also includes a recess 30 (annotated in green dashed lines) that receives protrusion 54 of latching element 50 (annotated in purple). Ex1014, [0027], [0033].



Ex1014, Fig. 2 (excerpted, annotated).

36. Catch 44 (annotated in yellow dashed lines) is biased by a spring 66 (annotated in red) that holds catch 44 in a first position “in which the latching element 50 is locat[ed] in the recess 30.” Ex1014, [0035]. This arrangement allows latch element 50 to be “held in engagement with the recess 30 securely, while being relatively easy to release.” Ex1014, [0038]. A user can then press on pressing portion 52 (annotated in pink) to push catch 44 against spring 66 “into a second configuration” in which latching portion 50 is disengaged from recess 30 and the user can “disconnect the wand 8 from the vacuum cleaner 4.” Ex1014, [0037]. Catch 44 does not interact in any way with the ribs. Marsh describes this

37. Therefore, Marsh discloses an attachment mechanism having an actuator (catch 44, annotated below in orange), three slots (recess 30 and two keyways, annotated in green), and three protrusions (latching portion 50 having a protrusion 54 and two ribs, annotated in purple) that engage with the three slots. Marsh's actuator (catch 44, annotated in yellow) includes a user-operable button (pressing portion 52, annotated in pink) interacts with one of the three protrusions (latching mechanism 50 having a protrusion 54).



38. In my opinion, the substitute claims, with the newly added limitations, are rendered obvious over Hoblingre in view of Marsh alone or with Brook

(indicated herein as “Marsh/Marsh+Brook”) (or Marsh/Marsh+Brook in view of Hoblingre) (New Ground 7), Mouhot in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot) (New Ground 10), Hoblingre/Maclaine in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Hoblingre/Maclaine) (New Ground 8), Mouhot/Maclaine in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot/Maclaine) (New Ground 11), Hoblingre/Maclaine/Jeannet in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Hoblingre/Maclaine/Jeannet) (New Ground 9), and Mouhot/Maclaine/Jeannet in view of Marsh/Marsh+Brook (or Marsh/Marsh+Brook in view of Mouhot/Maclaine/Jeannet) (New Ground 12).

1. New Ground 7: Hoblingre in View of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-49, 51, 54-56

39. In my opinion, Hoblingre anticipates claims 1-9, 15, 23-24, and 32. *See* Ex1003, ¶¶44-56, 59-122, which I incorporate here by reference. Patent Owner’s proposed substitute independent claims 40 and 55 introduce amendments in elements 40[b], 40[c], 55[b], and 55[c] compared to the original claim 1’s elements 1[b] and 1[c] and original claim 33’s elements 33[b] and 33[c] and introduces an entirely new limitations in elements 40[c] and 55[d].

40. Because Hoblingre anticipates claim 1, Hoblingre discloses all elements of claim 40 from claim 1. That leaves only the newly added language in elements 40[b], 40[c], and 40[d]. Patent Owner concedes that Hoblingre discloses

a “second slot” and “a second protrusion to engage with the second slot” as recited in elements 40[b] and 40[d], and that the only limitation that Hoblingre allegedly does not disclose is element 40[c]: “wherein the actuator interacts with only one of the first and second protrusions.” Contingent Motion to Amend, 12-14. But this limitation was not new.

41. In my opinion, a POSITA would have been motivated to combine Hoblingre and Marsh/Marsh+Brook to achieve claim 40. Specifically, a POSITA would have found it obvious to modify Hoblingre’s fastener to include an actuator that interacts with only one of two protrusions according to Marsh/Marsh+Brook’s teachings.

42. Marsh explains that its connector provides a secure connection that is “relatively easy to release” with one hand, “greatly enhanc[ing] the usability of the” appliance of which the connector is a part. Ex1014, [0037]. In my opinion, a person of ordinary skill would have been motivated to modify Hoblingre’s fastener by the structural and functional similarities—the slot and protrusion engagement and the spring-loaded actuator—between the Hoblingre fastener and the connector disclosed in Marsh.

43. A release actuator that interacts with only one of two protrusions rather than both protrusions is a simpler mechanism that is easier to manufacture. In fact, this simplification is a common technique used with connectors,

particularly where other protrusion/slot pairs can be engaged to ensure alignment of the connection and provide additional security without interaction with the actuator. In my opinion, a POSITA would have been motivated to modify Hoblingre to implement an actuator that interacts with only one of two protrusions such as by using an arrangement of protrusions and keyways that engage with each other and a latching element that engages/disengages with a specific slot and interacts with an actuator attached to a user-operable button as taught by Marsh/Marsh+Brook or by simply modifying Hoblingre's actuator to interact with only one of its two protrusions based on Marsh/Marsh+Brook's teachings.

44. Additionally, in my opinion, a POSITA would have had a reasonable expectation of success in modifying Hoblingre's appliance as proposed. Given the functional and structural similarities between Hoblingre's and Marsh/Marsh+Brook's connection mechanisms, a POSITA would only need to modify Hoblingre's actuator to achieve the simpler device desired, and it would not implicate any other structures or functions. Therefore, a POSITA would have been motivated to modify Hoblingre's appliance to implement an actuator that only interacts with one of two protrusions as taught by Marsh/Marsh+Brook.

- (i) Elements 40[b]/55[b]: "the body comprising an attachment mechanism having a first slot, a second slot, and an actuator"

45. Hoblingre discloses a first slot, a second slot, and an actuator. *See* Ex1003, ¶¶44-56, 59-122. I note that Patent Owner does not dispute this.

Contingent Motion to Amend, 12-14. Marsh/Marsh+Brook also discloses a first slot (recess 30), a second slot (one of the keyways), and an actuator (catch 44 and spring 66). Ex1014, [0027], [0033]-[0038], Fig. 2, Ex1015, [0030], Fig. 4a; *see* Section V.C.

- (ii) Elements 40[c]/55[c]: “the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot”

46. Hoblingre discloses the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot. *See* Ex1003, ¶¶44-56, 59-122. I note that Patent Owner does not dispute this. Contingent Motion to Amend, 12-14. Marsh/Marsh+Brook also discloses a first protrusion (protrusion 54 of latching portion 52) configured to engage with the first slot (recess 30) and a second protrusion (one of the ribs) to engage with the second slot (one of the keyways). Ex1014, [0027], [0033]-[0038], Figs. 2, 5, Ex1015, [0030], Fig. 4a; *see* Section V.C.

- (iii) Elements 40[d]/55[d]: “wherein the actuator interacts with only one of the first and second protrusions and”

47. Marsh’s catch 44 (together with spring 66, the actuator) comprises latching element 50 having protrusion 54 (the first protrusion). Ex1014, [0032], [0033]-[0035]. When a user “press[es] down on the pressing portion 52” of catch 44, catch 44 pushes against spring 66 into a channel and “disengages latching element 50 from the recess 30.” Ex1014, [0037]. Catch 44 and spring 66 do not

interact with either of the ribs. Thus, in my opinion, Marsh alone or in view of Brook teaches, to a POSITA, an actuator that interacts with only one of the first and second protrusions, at least to the same extent as the '660 patent. As I have discussed above, it would have been obvious to modify Hoblingre's actuator to include an actuator that interacts with only one of the first and second protrusions based on Marsh's (and Brook's) teachings of latching portion 52 and recess 30. *See* Section V.C. Thus, Hoblingre/Marsh or Hoblingre/Marsh/Brook renders obvious contingent claim 40.

(iv) Claims 41-49, 51, and 54

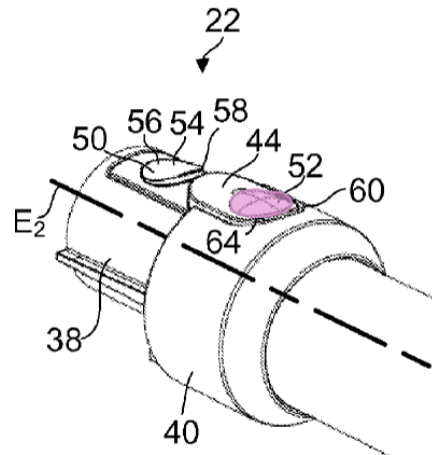
48. Contingent claims 41-49, 51, and 54 are dependent claims of independent claim 40 and correspond to original claims 2-9, 15, 24, and 32. Hoblingre in view of Marsh/Marsh+Brook discloses the elements recited in contingent claims 41-49, 51, and 54 because Hoblingre discloses those elements from corresponding claims 2-9, 15, 24 and 32. I incorporate here by reference my analysis in my declaration in support of the Petition. *See* Ex1003, ¶¶44-56, 59-122.

(v) Element 55[f]: "further comprising a user operated button which engages with the actuator."

49. Element 55[f] corresponds to element 33[e], which is the only difference claim 33 adds to claim 1. Because Hoblingre anticipates claim 1, Hoblingre discloses all elements of claim 33, except for element 33[e]. I

incorporate by reference my analysis in my declaration in support of the Petition.
See Ex1003, ¶¶44-56, 59-122.

50. In my opinion, the Hoblingre/Marsh/Marsh+Brook combination renders this additional element from element 55[f], obvious. A user can interact with pressing portion 52 (annotated in pink) to push catch 44 against spring 66 “into a second configuration” to disengage latching portion 50 from the recess 30. Ex1014, [0037].



Ex1014, Fig. 5 (annotated).

51. It is my opinion that it would have been obvious to a POSITA to modify Hoblingre’s actuator to include a button based on Marsh’s teachings of pressing portion 52 of catch 44. Thus, in my opinion, the Hoblingre/Marsh/Marsh+Brook combination renders claim 55 obvious.

(vi) Claim 56

52. Actuation of Marsh's button (pressing portion 54 of latching portion 50) moves catch 44 from a first position in which latching element 50 is "held in engagement" with recess 30 to a second position in which latching element 50 is disengaged from recess 30 and an attachment can be disconnected from the appliance. In my opinion, a POSITA would have understood that a button that engages with the actuator, as taught by Marsh, would similarly move Hoblingre's actuator from a first position (with the pins 6 trapped between the edges of the slots 12 and 28) to a second position (with coil spring 24 compressed, allowing pins 6 to be removed from between the slots 12 and 28) if the teachings of a button was combined with Hoblingre's fastener. For the reasons explained above and which I incorporate here by reference, in my opinion, a POSITA would have been motivated to combine Hoblingre and Marsh and would have had a reasonable expectation of success in making the combination. Thus, in my opinion, the Hoblingre/Marsh/Marsh+Brook combination renders claim 56, which corresponds to original claim 34, obvious.

2. New Grounds 8 and 9: Hoblingre/Maclaine in View of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-54 and Hoblingre/Maclaine/Jeannet in View of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-56

53. I incorporate my analysis of Ground 7 here by reference in its entirety.

54. In my opinion, the combination of Hoblingre in view of Maclaine additionally renders obvious claims 1-9, 15, 18, 23-24, and 30-32. *See* Ex1003,

¶¶44-56, 123-138, which I incorporate here by reference. Thus, the combination of Hoblingre in view of Maclaine and Marsh/Marsh+Brook renders obvious claims 40-54 because Marsh/Marsh+Brook teaches the additional elements added in the Contingent Claims when combined with Hoblingre and Maclaine.

55. In my opinion, the combination of Hoblingre in view of Maclaine and Jeannet additionally renders obvious claims 33 and 34. *See* Ex1003, ¶¶44-56, 139-160, which I incorporate here by reference. Thus, the combination of Hoblingre in view of Maclaine, Jeannet, and Marsh/Marsh+Brook renders obvious claims 40-56 because Marsh/Marsh+Brook teaches the additional elements added in the Contingent Claims when combined with Hoblingre, Maclaine, and Jeannet.

3. New Ground 10: Mouhot in view of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-49, 51, 54-56

56. In my opinion, Mouhot anticipates claims 1-9, 15, 23-24, and 32. *See* Ex1003, ¶¶44-56, 161-219, which I incorporate here by reference. Because Mouhot anticipates claim 1, Mouhot discloses all elements of claim 40 that are in common with claim 1. That leaves only the changes in elements 40[b], 40[c], and 40[d]. For those elements, Patent Owner concedes that Mouhot discloses a “second slot” and “a second protrusion to engage with the second slot” as recited in elements 40[b] and 40[d], and that the only limitation that Mouhot allegedly does not disclose is element 40[c]: “wherein the actuator interacts with only one of the first and second protrusions.” Contingent Motion to Amend, 16-19. But

Mouhot discloses the concept of having one side of its structure different than the other side and thus, in my opinion, a POSITA would have understood that one side could have the actuator that interacts with the protrusion while the other side does not interact with the protrusion on that side. Ex1005, 2. Further, the concept of having an actuator on a body that interacts with only one protrusion from an attachment was not new.

57. In my opinion, a POSITA would have been motivated to combine Mouhot and Marsh/Marsh+Brook to achieve claim 40. Specifically, a POSITA would have found it obvious to modify Mouhot's fastener to include an actuator that interacts with only one of two protrusions according to Marsh/Marsh+Brook's disclosure.

58. Marsh explains that its connector provides a secure connection that is "relatively easy to release" with one hand, "greatly enhanc[ing] the usability of the" appliance of which the connector is a part. Ex1014, [0037]. A person of ordinary skill would have been motivated to modify Mouhot's fastener by the structural and functional similarities—the slot and protrusion engagement and the spring-loaded actuator—between the Mouhot fastener and the connector disclosed in Marsh/Marsh+Brook. In fact, a release actuator that interacts with only one of two protrusions rather than both protrusions is a simpler mechanism that is easier to manufacture. This simplification is a common technique used with connectors,

particularly where other protrusion/slot pairs can be engaged to ensure alignment of the connection and provide additional security without interaction with the actuator. Indeed, Mouhot discloses an embodiment in which “at least one of the sides of the socket delimiting the slot comprises a stop means that delimit at least one locking position”: In other words, Mouhot explicitly contemplates an embodiment of its fastener in which only one side is used to implement the locking/retention of the two halves of the fastener. Ex1005, 2. In my opinion, a POSITA would therefore have been motivated to modify Mouhot to implement an actuator that interacts with only one of two protrusions such as by using an arrangement of protrusions and keyways that engage with each other and a latching element that engages/disengages with a specific slot and interacts with an actuator attached to a user-operable button as taught by Marsh/Marsh+Brook or by simply modifying Mouhot’s actuator to interact with only one of its two protrusions based on Marsh/Marsh+Brook’s teachings.

59. Moreover, it is my opinion that a POSITA would have had a reasonable expectation of success in modifying Mouhot’s appliance as proposed. Given the functional and structural similarities between Mouhot’s and Marsh/Marsh+Brook’s connection mechanisms, in my opinion, a POSITA would only need to modify Mouhot’s actuator to achieve the simpler device desired, and it would not implicate any other structures or functions. Therefore, a POSTIA

would have been motivated to modify Mouhot's appliance to implement an actuator that only interacts with one of two protrusions as taught by Marsh/Marsh+Brook.

- (i) Elements 40[b]/55[b]: "the body comprising an attachment mechanism having a first slot, a second slot, and an actuator"

60. Mouhot discloses a first slot, a second slot, and an actuator. *See* Ex1003, ¶¶44-56, 161-219, which I incorporate here by reference. Patent Owner does not dispute this. Contingent Motion to Amend, 16-19. As discussed above, Marsh also discloses a first slot, a second slot, and an actuator. Ex1014, [0027], [0033]-[0038], Fig. 2; Ex1015, [0030], Fig. 4a; *see* Section V.C.

- (ii) Elements 40[c]/55[c]: "the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot"

61. Mouhot discloses the attachment comprising a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot. *See* Ex1003, ¶¶44-56, 161-219, which I incorporate here by reference. I note that Patent Owner does not dispute this. Contingent Motion to Amend, 16-19. Marsh/Marsh+Brook also discloses a first protrusion configured to engage with the first slot and a second protrusion to engage with the second slot (one of the keyways). Ex1014, [0027], [0033]-[0038], Figs. 2, 5; *see* Section V.C.

- (iii) Elements 40[d]/55[d]: "wherein the actuator interacts with only one of the first and second protrusions and"

62. Marsh/Marsh+Brook teaches, to a POSITA, an actuator interacts with only one of the first and second protrusions. *See* Section V.C. In my opinion, it would have been obvious to a POSITA to modify Mouhot’s actuator to include an actuator that interacts with only one of the first and second protrusions based on Marsh/Marsh+Brook’s teachings of latching portion 52 and recess 30. *See* Section V.C. Thus, Mouhot/Marsh/Marsh+Brook renders obvious contingent claim 40.

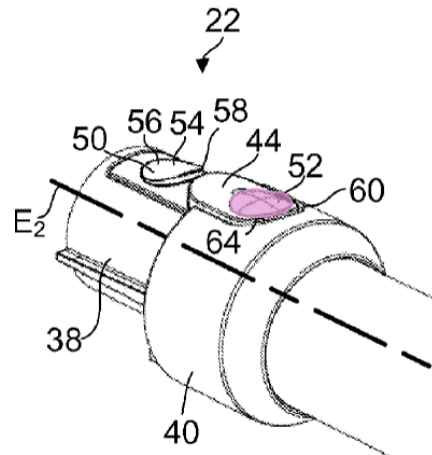
(iv) Claims 41-49, 51, and 54

63. Contingent claims 41-49, 51, and 54 (dependent on claim 40) correspond to original claims 2-9, 15, 24, and 32. Mouhot in view of Marsh/Marsh+Brook discloses the elements recited in contingent claims 41-49, 51, and 54 because Mouhot discloses those elements from corresponding claims 2-9, 15, 24 and 32. *See* Ex1003, ¶¶44-56, 161-219, which I incorporate here by reference.

(v) Element 55[f]: “further comprising a user operated button which engages with the actuator.”

64. Original claim 33 recited all of the elements of original claim 1 and one additional element 33[e]. In my opinion, because Mouhot anticipates claim 1, Mouhot discloses all elements of claim 33, except for element 33[e]. *See* Ex1003, ¶¶44-56, 161-219, incorporated here by reference. The Mouhot/Marsh/Marsh+Brook combination renders this additional element, corresponding to element 55[f], obvious.

65. As I have discussed above, a user can interact with pressing portion 52 (annotated in pink) to push catch 44 against spring 66 “into a second configuration” to disengage latching portion 50 from the recess 30.



Ex1014 [0037], Fig. 5 (annotated).

66. And as I have discussed above, it is my opinion that it would have been obvious to a POSITA to modify Mouhot’s actuator to include a button based on Marsh’s teachings of pressing portion 52 of catch 44. *See* Section V.C. Thus, the Mouhot/Marsh/Marsh+Brook combination renders claim 55 (corresponding to original claim 33) obvious.

(vi) Claim 56

67. Actuation of Marsh’s button (pressing portion 54 of latching portion 50) moves catch 44 from a first position in which latching element 50 is “held in engagement” with recess 30 to a second position in which latching element 50 is disengaged from recess 30 and an attachment can be disconnected from the

appliance. In my opinion, a POSITA would have understood that a button that engages with the actuator, as taught by Marsh, would similarly move Mouhot's actuator from a first position (with the pins 6 trapped between the edges of the slots 12 and 28) to a second position (with coil spring 24 compressed, allowing pins 6 to be removed from between the slots 12 and 28) if the teachings of a button was combined with Mouhot's fastener. For the reasons explained above and incorporated here by reference, it is my opinion that a POSITA would have been motivated to combine Mouhot and Marsh and would have had a reasonable expectation of success in making the combination. Thus, the Mouhot/Marsh/Marsh+Brook combination renders claim 56, corresponding to original claim 34, obvious.

4. New Grounds 11 and 12: Mouhot/Maclaine in View of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-54 and Mouhot/Maclaine/Jeanet in View of Marsh/Marsh+Brook Renders Obvious Contingent Claims 40-56

68. I incorporate my analysis of Ground 10 here by reference in its entirety.

69. The combination of Mouhot in view of Maclaine additionally renders obvious claims 1-9, 15, 18, 23-24, and 30-32. *See* Ex1003, ¶¶44-56, 220-235, which I incorporate here by reference. Thus, the combination of Mouhot in view of Maclaine and Marsh/Marsh+Brook renders obvious claims 40-54 because

Marsh/Marsh+Brook teaches the additional elements added in the Contingent Claims when combined with Mouhot and Maclaine.

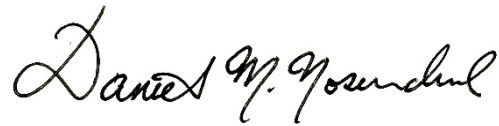
70. The combination of Mouhot in view of Maclaine and Jeannet additionally renders obvious claims 33 and 34. *See* Ex1003, ¶¶44-56, 236-257, which I incorporate here by reference. Thus, the combination of Mouhot in view of Maclaine, Jeannet, and Marsh renders obvious claims 40-56 because Marsh/Marsh+Brook teaches the additional elements added in the Contingent Claims when combined with Mouhot, Maclaine and Jeannet.

VI. ADDITIONAL REMARKS

71. I currently hold the opinions expressed in this Declaration. My analysis may continue, and I may acquire additional information and/or attain supplemental insights that may result in added observations.

I hereby declare that all statements made are of my own knowledge, are true, and that all statements made on information and belief are believed to be true. I further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this proceeding.

Executed this 21st day of November 2024, in Newtown, PA.

A handwritten signature in black ink, reading "Daniel M. Nosenchuck". The signature is written in a cursive style with a large, stylized 'D' and 'N'.

Dr. Daniel M. Nosenchuck