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MENEFEE, JAMES A	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

Transmittal of Communication to Third Party Requester *Inter Partes* Reexamination	Control No.	Patent Under Reexamination	
	95/001,847	7944173	
	Examiner	Art Unit	
	JAMES MENEFEE	3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

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Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination prceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

ACTION CLOSING PROSECUTION (37 CFR 1.949)	**Control No.**	**Patent Under Reexamination**
	95/001,847	7944173
	Examiner	**Art Unit**
	JAMES MENEFEE	3992

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:
Patent Owner on _____
Third Party(ies) on _____

Patent owner may once file a submission under 37 CFR 1.951(a) within 1 month(s) from the mailing date of this Office action. Where a submission is filed, third party requester may file responsive comments under 37 CFR 1.951(b) within 30-days (not extendable- 35 U.S.C. § 314(b)(2)) from the date of service of the initial submission on the requester. **Appeal cannot be taken from this action.** Appeal can only be taken from a Right of Appeal Notice under 37 CFR 1.953.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892
2. ☐ Information Disclosure Citation, PTO/SB/08
3. ☐ _____

PART II. SUMMARY OF ACTION:

1a. ☒ Claims 1-13 are subject to reexamination.
1b. ☐ Claims _____ are not subject to reexamination.
2. ☐ Claims _____ have been canceled.
3. ☒ Claims 1-13 are confirmed. [Unamended patent claims]
4. ☐ Claims _____ are patentable. [Amended or new claims]
5. ☐ Claims _____ are rejected.
6. ☐ Claims _____ are objected to.
7. ☐ The drawings filed on _____ ☐ are acceptable ☐ are not acceptable.
8 ☐ The drawing correction request filed on _____ is: ☐ approved. ☐ disapproved.
9 ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has: ☐ been received. ☐ not been received. ☐ been filed in Application/Control No _____
10. ☐ Other _____

ACTION CLOSING PROSECUTION

This is an *inter partes* reexamination of U.S. Patent No. 7,944,173 ("the '173 patent") based on the reexamination request filed 12/9/2011 ("Request"). Claims 1-13 are subject to reexamination and remain pending as originally issued. Prosecution previously progressed until a Right of Appeal Notice was mailed 4/25/2013, and the patent owner filed an appeal brief on 7/29/2013 ("Brief"). For the reasons that follow, the examiner reconsiders the Office's prior position, finds the arguments in the Brief persuasive, and reopens prosecution so that the claims may be confirmed. While prosecution is reopened for these purposes, it is now closed with this action, as an ACP is appropriate when all claims are confirmed. Note the examiner of record has changed.

References

JP Patent App. Pub. H10-112301 ("Nishimura I")

JP Patent App. Pub. H11-126585 ("Nishimura II")

JP Patent App. Pub. 2000-67825 ("Nishimura III")

JP Patent App. Pub. 2000-82451 ("Nishimura IV")

JP Patent App. Pub. 2002-110254 ("Sato")

EP 1 266 725 ("Fohr")

U.S. Patent Application Publication 2005/0233219 to Gozdz ("Gozdz")

U.S. Patent Application Publication 2004/0005265 to Chiang ("Chiang")

U.S. Patent Application Publication 2002/0157516 to Judge ("Judge")

U.S. Patent No. 6,563,290 to Sakakibara ("Sakakibara")

U.S. Patent No. 6,175,211 to Brotto ("Brotto")

U.S. Patent No. 6,304,058 to Watson ("Watson")

Hironaka et al., Manganese Type Lithium Battery for Electric Vehicle, Shin-Kobe Tech. Report No. 10 (2000) ("Hironaka")

Stassen et al., Metallic Lithium Batteries for High Power Applications, J. Power Sources 105, 145-150 (2002) ("Stassen")

Richards et al., A Computer-Controlled Power Tool for Servicing the Hubble Space Telescope, J. Aerospace, Sec. 1, Vol. 105, p. 810 (1996) ("Richards")

APR18650M1 Datasheet ("APR")

Van Schalkwijk Declaration filed with Request

Supplemental Van Schalkwijk Declaration filed 8/10/2012

Blomgren Declaration filed 4/27/2012

Ehsani Declaration filed 4/27/2012

Zeiler Declaration filed 4/27/2012

Meyer Declaration filed 4/27/2012 (originally filed during previous examination)

Supplemental Blomgren Declaration filed 12/19/2012

Supplemental Ehsani Declaration filed 12/19/2012

Supplemental Zeiler Declaration filed 12/19/2012

Translations of all foreign language documents are as found in the Request.

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in *inter partes* reexamination proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to the patent owner in a reexamination proceeding. Additionally, 35 U.S.C. 314(c) requires that *inter partes* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.937). Patent owner extensions of time in *inter partes* reexamination proceedings are provided for in 37 CFR 1.956. Extensions of time are not available for third party requester comments, because a comment period of 30 days from service of patent owner's response is set by statute. 35 U.S.C. 314(b)(3).

Notification of Other Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.985(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the '173 patent throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP § 2686 and 2686.04.

Priority

It was previously determined that the '173 patent is only entitled to a priority date of 12/9/2008. The examiner now changes this finding, and determines that the '173 patent is entitled to at least a filing date of 11/24/2003. The '173 patent is a continuation of U.S. Patent No. 7,554,290, which was the subject of now-concluded reexamination proceeding 95/001,848

("the '1848 proceeding"). These patents share the same specification, same priority documents, and are drawn to similar claimed subject matter. Indeed, a terminal disclaimer was filed in the original prosecution because the examiner found that the claims of the '173 were not patentably distinct from those of the parent '290 patent. Furthermore, the evidence and arguments as to priority are similar as that presented in the '1848 proceeding. Accordingly, the examiner now adopts the same reasoning as to priority that was presented in the '1848 proceeding. See 95/001,848, ACP mailed 8/28/2012 at 4-13. The primary point of contention in both cases is the support/enablement of the greater than 20 amps discharge current limitations, and the arguments concerning battery pack versus cells in general, thus the reasoning in the '1848 proceeding is equally applicable here.

Proposed Claim Rejections - 35 USC §§ 102 & 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.[1] No RLP.

2. Claims 1-2, 4, 7-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura I in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

3. Claims 1-2, 4, and 7-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura I in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

4. Claims 1-2 and 4-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura I in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

5. Claims 1-2, 4, 6-9, and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura I in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

6. Claims 1-2, 4, 7-10 and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura I in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

[1] Numbering is as presented in the Order.

7. No RLP.

8. Claims 1-5, 7-9, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura II in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

9. Claims 1-5 and 7-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura II in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

10. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura II in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

11. Claims 1-5, 7-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura II in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

12. Claims 1-9 and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura II in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

13. Claims 1, 7-8, and 10-13 are not rejected under 35 U.S.C. 102(a) as being anticipated by Fohr. This rejection was previously applied and is withdrawn and not adopted.

14. No RLP.

15. Claims 1-2, 4-9, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura III in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

16. Claims 1-2 and 4-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura III in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

17. Claims 1-2 and 4-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura III in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

18. Claims 1-2, 4-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura III in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

19. Claims 1-2, 4-9, and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura III in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

20. No RLP.

21. Claims 1-2, 4-5, 7-9, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura IV in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

22. Claims 1-2, 4-5, 7-8, and 10-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura IV in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

23. Claims 1-2, 4-8, and 10-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura IV in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

24. Claims 1-2, 4-5, 7-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura IV in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

25. Claims 1-2, 4-9 and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura IV in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

26. No RLP.

27. Claims 1-10 and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

28. Claims 1-8 and 10-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

29. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

30. Claims 1-9 and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

31. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

32. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Hironaka in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

33. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Hironaka in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

34. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Hironaka in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

35. Claims 1-9 and 11-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Hironaka in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

36. Claims 1-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Hironaka in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

37. No RLP

38. Claims 1, 4-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Stassen in view of Sakakibara. This rejection was previously applied and is withdrawn and not adopted.

39. Claims 1, 4-8 and 10-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Stassen in view of Fohr. This rejection was previously applied and is withdrawn and not adopted.

40. Claims 1, 4-8, and 10-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Stassen in view of Richards. This rejection was previously applied and is withdrawn and not adopted.

41. Claims 1 and 4-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Stassen in view of Brotto. This rejection was previously applied and is withdrawn and not adopted.

42. Claims 1 and 4-10, and 12-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Stassen in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

43. No RLP

44. No RLP

45. Claims 1-2, 4 and 7-13 are not rejected under 35 U.S.C. 103(a) as being unpatentable over Gozdz in view of APR and further in view of Watson. This rejection was previously applied and is withdrawn and not adopted.

46. No RLP

STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

Claims 1-13 are confirmed. There is not taught or disclosed in the prior art a battery pack for powering a hand held power tool, comprising a plurality of battery cells having a lithium-based chemistry and being capable of producing an average discharge current greater than or equal to approximately 20 amps.

Response to Arguments

The arguments presented in the Brief have been fully considered. The rejections which were of record on appeal and are now withdrawn involved anticipation by Fohr and various obviousness rejections.

Anticipation by Fohr

Patent owner argues that Fohr does not describe lithium-based battery cells producing an average discharge current of greater than or equal to approximately 20 amps as claimed.

As discussed in the previous rejection, Fohr describes a hand held power tool powered by an energy store. Fohr discloses that the energy store may comprise capacitors and provide a discharge current of 20-30 amps. ¶¶ [0006]-[0008]. Fohr additionally discloses that the capacitor based store may be replaced by a store comprising lithium-based battery cells. ¶ [0009]; claim 6. The examiner previously reasoned that after this replacement, the lithium-based cells will also necessarily produce a current of 20-30 amps, meeting the claims.

The problem with this reasoning is that there is nothing whatsoever in the reference that indicates the current produced by any lithium-based cells. The only times current levels are described are at paragraphs [0008] and [0019], and claim 4, and only in the context of embodiments using capacitors. Both of the paragraphs state that high currents are possible if the capacitors are connected in parallel with each other, and claim 4 likewise refers to the energy store comprising capacitors. Nothing in the reference suggests that lithium-based cells can also produce this current.

The examiner previously argued that claim 6 of Fohr supports the notion that any lithium-based battery cells would produce 20-30 amps. The reasoning was that claim 6 depends from claim 4; claim 4 states that the capacitors are capable of producing a continuous load of 20-30 A, while claim 6 states that Li batteries may replace the capacitors. The examiner thus argued that the Li batteries would take on the limitations of parent claim 4, and also produce 20-30 amps.

As the patent owner pointed out in the Brief, this line of reasoning is unconvincing because of claim 5 of Fohr. Claim 6 also depends on claim 5, which requires that the capacitors can be charged in less than one minute. It cannot credibly be stated that battery cells such as those in claim 6, like NiCd or Li cells, can be charged in less than a minute. Fohr itself states that known rechargeable battery packs (such as these) typically take 15 minutes to 12 hours to charge. ¶¶ [0002]-[0003]. Thus, it is apparent that the cells of claim 6 do not take on the characteristics of parent claim 5. Likewise, we cannot presume that the cells of claim 6 take on all of the characteristics of parent claim 4. Claim 4 therefore does not support a finding that the Li based cells mentioned in Fohr produce a 20-30 amp output. There is therefore no disclosure in the reference of a 20-30 amp output.

Finally, one might argue that we can presume a 20-30 amp output due to the requirements of the application—a drill a screwdriver, or the like. Fohr claim 1, ¶ [0001]. But such an argument, if made, would not be persuasive, because there is no evidence on the record that a 20-30 amp battery output is *required* of such devices. Indeed, the Richards reference describes a battery operated drill where the battery produces a 1 A continuous current and 8.25 A pulse current discharge. Richards p. 811. It is therefore clear that drills do not require a battery having a greater than 20 A output, and we cannot say that Fohr's battery inherently provides such an output.

In addition to the disclosure problem, there is also a problem of enablement. It is clearly established on the record, via experts from both parties, that certain descriptions are required to enable a person of ordinary skill in the art to make or use the claimed invention. See Priority, *supra* (citing to the 8/28/2012 ACP in 95/001,848, summarizing the patent owner's and third

party's expert's arguments and making enablement findings). The examiner found that the patent owner's and Blomgren's arguments were most credible, and determined that cell chemistry, geometry and size, and battery pack management and design were important information required to enable the invention.[2] See also Supp. Ehsani Decl. ¶¶ 21-49. Importantly, Fohr tells us nothing about the lithium-based battery pack, except for the unhelpful high level view of Fig. 1, the fact that the pack connects to the tool in the same way as a capacitor based store, and of course the mere fact of the chemistry being lithium-based. ¶ [0009]. There is nothing about the size of the cells, the actual design of the pack, or the management of the pack such that a lithium-based battery pack could actually be made to produce a 20-30 amp average discharge current. See also Brief pp. 21-22, Supp. Ehsani Decl. ¶ 54, with which the examiner agrees. There is simply no way a person of ordinary skill could make or use the invention given the sparse description of Fohr. Fohr therefore does not provide an enabling disclosure of the claims and may not be used to anticipate the claims.

Thus, Fohr is silent as to the current produced by any lithium-based batteries, such current as claimed is not necessarily inherent based on the current of the capacitor based store, and the current as claimed is not necessarily required by the application. Additionally, Fohr does not enable the making or using of the claimed invention. The rejection based on Fohr is withdrawn.

Nishimura I-IV as Primary Reference

[2] Notably, the requirements for enablement proposed by the third party requester's expert are even more arduous and are also clearly not present in Fohr.

The four Nishimura references have a similar disclosure, as relevant to the '173 patent claims. The discussion herein will focus on Nishimura I, but is applicable to each of the four references.

Nishimura I describes a battery pack having lithium-based cells. ¶ [0001]. It mentions known lithium-based batteries, used for portable electronic devices such as telephones and computers, and states that in the future it is expected that large batteries may be used for devices such as electric automobiles and nighttime power storage, though it has been problematic to use lithium for large current applications such as power tools, vacuum cleaners, and game consoles. ¶ [0002]. The detailed description focuses on electric vehicles, and also the actual embodiments are drawn to electric vehicle batteries. See e.g. ¶ [0005]; [0036]-[0038]. Nishimura I does allow for batteries in many different types of devices, but these other devices, including power tools, are mentioned only in passing and battery packs for such applications are not actually described. See ¶¶ [0003], [0019], [0039]. It is also noted that "hand held" power tools are not mentioned.

The premise of the previously applied rejections was to use the high current lithium-based pack of Nishimura I in the hand-held battery operated power tools of the secondary references. See, e.g., RAN mailed 4/25/2013 at 22-26. The problem with this is that Nishimura I only describes very large battery packs. As shown by patent owner in the Brief, the Nishimura I pack is larger than an entire power tool, and a reasonable guess is that it would weigh approximately 45-60 pounds. This is not at all appropriate for a "hand held" power tool as claimed. While bodily incorporation is not a requirement for obviousness, a person of ordinary skill in the art must still have a reasonable expectation of success in making the combination, and the references cannot be rendered unsuitable for their intended purpose. If a 45 pound battery

were placed in the hand held tools of the secondary references, they would simply be unusable for their intended purposes—one cannot be expected to operate a 45+ pound hand held drill or saw, or the like. A person of ordinary skill would not see this as a successful result.

Additionally, the third party had previously argued, and the Office agreed, that we could merely take a few cells out of the Nishimura I pack, and those cells would be of suitable size to power a hand held power tool. The examiner disagrees. It is totally arbitrary, and not at all supported by the reference, to disassemble the Nishimura I battery pack and use three of its cells simply because that would meet the claim. This appears to be hindsight at its best. It is also of no moment that Nishimura I mentions “power tools” in passing as a potential application for its battery. Again, the reference does not mention "hand held" and, given the size of the disclosed battery packs, it seems more likely that use in hand held tools was not contemplated. For example, there have existed cabinet saws such as the Hitachi C10LA that weigh hundreds of pounds and could not be considered hand held. The Nishimura I battery seems more appropriate for such a power tool, not for, for example, the cordless drills of Sakakibara, Fohr, or Richards, or the similarly sized tools of the other secondary references.

Finally, to the extent that we might use only a portion of the Nishimura I pack and plug it into a hand held power tool, there would be a problem of enablement. As discussed above, certain information is required to enable a person of ordinary skill in the art to make or use the battery pack invention. The hypothetical battery pack, which would be formed to include only 3 of the Nishimura I cells and be sized to support and attach to a hand held power tool, is not in any way described, and the examiner finds that there is insufficient information for a person of

ordinary skill in the art to make or use such a pack. See Supp. Ehsani Decl. ¶¶ 55-85, explaining why the disclosure is lacking, including as to enablement.

Thus, the proposed rejection fails whether based on the entirety of the Nisimura pack, or whether based on using only a part of the pack. The examiner additionally agrees with pages 23-32 of the Brief.

Sato as Primary Reference

Sato is drawn to a lithium-based battery intended to have a higher output than those of the prior art so that it may be used in applications such as electric vehicles, power tools, or the like. See ¶¶ [0003], [0007]. Note that these are the only mentions of the words "power tools" and there is no actual embodiment shown where the batteries are actually used to supply power to power tools. The premise of the rejections is that Sato's battery cells can be used in the power tool battery packs of the secondary references.

Patent owner has presented evidence that the discharge rates described in Sato are abnormally high for the described 18650 battery cell, would lead to overheating of the cells, and that it was known at the time of the invention that such cells were not capable of being discharged in this manner to achieve high current as claimed. Blomgren Decl. ¶¶ 313-314; Supp. Blomgren Decl. ¶¶ 88-92. "An obviousness determination requires that a skilled artisan would have perceived a reasonable expectation of success in making the invention in light of the prior art." *Amgen, Inc. v. F. Hoffmann-La Roche Ltd.*, 92 USPQ2d 1289, 1306 (Fed. Cir. 2009). Blomgren's declaration testimony shows that a person of ordinary skill in the art would not

expect to succeed in making the combination, of using these cells in the secondary references to provide a greater than 20 amp current to hand held power tools.

The third party's expert stated that such arguments are irrelevant due to the fact that Sato discloses cells capable of discharge greater than 20 amps. Supp. Van Schalkwijk Decl. ¶ 107. But regardless what the reference might disclose individually it remains that there must be a reasonable expectation of success in making the combination, therefore it is Van Schalkwijk's focus on Sato alone, rather than on the combination in a hand held power tool, that is irrelevant.

There is additionally a problem of enablement. While it is true that a non-enabling reference may be used in an obviousness rejection for all that it discloses, the prior art still must enable a person of ordinary skill to make or use the invention. *In re Kumar*, 76 USPQ2d 1048, 1052 (Fed. Cir. 2005). Sato describes cells, but does not describe any pack including those cells. As was discussed above as to Fohr, the record shows that certain information is required to enable a person of ordinary skill in the art to make or use the invention, and there is no information as to how Sato's cells would be implemented in a pack. One cannot simply presume that the same pack would be used as in the secondary references, given the different battery cells that are involved. There is therefore insufficient information for a person of ordinary skill in the art to make or use the claimed battery pack. See also Supp. Ehsani Decl. ¶¶ 88-90, Blomgren Decl. ¶¶ 312 and Supp. Blomgren Decl. ¶¶ 95-97.

Hironaka as Primary Reference

The premise of the rejections based on Hironaka was to use Hironaka's lithium-based cells in the hand held power tools of the secondary references. More particularly, the requester's

proposed rejections used eight of the cells from Hironaka's Fig. 9 embodiment. See, e.g., Claim Chart HH pp. 1-2 (describing use of 8 of the cells from the Fig. 9 embodiment). Patent owner argues that Hironaka's cells are too large to be used in a hand held power tools and it would not have been obvious to combine the reference with Sakakibara, Fohr, etc.

Hironaka's battery cells are used for powering electric vehicles, and Hironaka's battery module of the Fig. 9 embodiment includes 48 cells. Hironaka does not in any way suggest that its cells are useable with power tools, nor does it suggest that one may simply open the module and use only 8 of the cells. The examiner finds that it would have been purely hindsight to arbitrarily take 8 of these cells out of an electric vehicle battery module and use them to power a hand held power tool.

Additionally, Hironaka does not enable a person of ordinary skill in the art to make or use a battery pack using only a portion of its cells. As discussed above, certain information is required to enable a person of ordinary skill in the art to make or use the battery pack invention. The hypothetical battery pack, which would be formed to include only 8 of Hironaka's cells and be sized to support and attach to a hand held power tool, is not in any way described, and the examiner finds that there is insufficient information for a person of ordinary skill in the art to make or use such a pack. See Supp. Ehsani Decl. ¶¶ 97-101, explaining why the disclosure is lacking.

Stassen as Primary Reference

The premise of the rejections based on Stassen was to use Stassen's lithium-based cells, with their greater than 20 amp discharge current, in the hand held power tools of the secondary

references. Patent owner argues that Stassen's cells do not in fact meet the limitations of the claims, and also a person of ordinary skill would not use Stassen's cells due to safety concerns.

Stassen describes lithium-based battery cells and suggests two embodiments for its cells—a high energy design or a high power design. The bulk of Stassen seems to refer to the high energy design, with just section 3.6 referring to high power. The focus of the high energy cells is for use with electric vehicles. See §§ 3.5, 4. Stassen suggests that the high power cells may be feasible in power tools. See § 4. High energy and high power cells will clearly have different requirements and characteristics, see *id.*, therefore disclosure as to the features of one type is not necessarily disclosure as to the other type.

The first problem then is that the proposed rejection mixes and matches from the different embodiments to meet the claims. Request Claim Chart Exhibit II on its fourth page relies on the six cell battery module from p. 148 and its 3 Ah capacity, and states that on p. 149 this module is discharged at 16C, yielding a 48 A discharge current. This is not accurate, as the p. 148 module is a high energy module (as it is compared to the NEDC, an electric vehicle driving cycle), and the p. 149 16C discharge is for the high power cells. In fact, Stassen does not state the discharge rate for the high energy module, and does not state the capacity of the high power cells, therefore it is not clear what the discharge current would be for either embodiment. And again, we cannot simply presume that the cells of the different embodiments have the same characteristics given the different requirements that they must meet. Accordingly, there is no clear discharge current disclosure in Stassen, and the rejections cannot be maintained.

An additional problem, as pointed out by Blomgren, is the safety concerns of using Stassen's cells. See Supp. Blomgren Decl. ¶¶ 109-113. Stassen's cells use a SO_2 based

electrolyte, and Blomgren explains that this material raises significant concerns for the user's safety. The examiner previously gave a lot of weight to the conclusion expressed in Stassen itself that the cells were safe. The examiner reconsiders for the reasons given in the Supplemental Blomgren Declaration. Particularly, Stassen acknowledges that SO_2 can be released from the cells, and seems to disregard this as significant. Blomgren points out that SO_2 is poisonous, therefore *any* release would raise significant concerns to a nearby user. The fact that the cells are to be used (after the combination) with *hand held* power tools (rather than in some sort of automated industrial application for example) means that safety concerns for the user would be important.

The examiner previously acknowledged these safety concerns but found that they did not impact the obviousness analysis, comparable to business-type decisions rather than technological problems. The examiner reconsiders, as the safety concerns impact whether a person of ordinary skill would make the combination. A proposed modification cannot render the prior art unsatisfactory for its intended purpose. Again, the premise of each combination is that Stassen's cells may be used in the hand held power tools of the secondary references. But it would render those secondary references unsatisfactory for their intended purpose—use as hand held power tools—to power them with dangerous battery cells. The evidence of record, in the form of the Supplemental Blomgren Declaration, is that the cells would be dangerously unsatisfactory for use in hand held power tools, thus weighing against making the combinations.

A final issue is that Stassen merely gives some information about battery cells (for the high power embodiment), but does not describe any pack including those cells. Again, the record shows that certain information is required to enable a person of ordinary skill in the art to

make or use the battery pack invention, and there is no information as to how Stassen's cells would be implemented in a pack. One cannot simply presume that the same pack would be used as in the secondary references, given the different battery cells that are involved. There is therefore insufficient information for a person of ordinary skill in the art to make or use the claimed battery pack. See also Supp. Ehsani Decl. ¶¶ 102-103.

Gozdz as Primary Reference

As discussed herein, the '173 patent is entitled to at least a filing date of 11/24/2003 based on its priority documents. Gozdz and APR are therefore not prior art and this rejection is withdrawn.

Secondary Considerations

In addition to arguing the merits of the obviousness rejections, the patent owner has presented objective evidence of non-obviousness. Patent owner has supplied evidence of such secondary considerations in the form of the Meyers Declaration (which was first filed during the prosecution of the parent application), the Zeiler Declaration, and the Supplemental Zeiler Declaration.

Nexus

The Federal Circuit has stated that it is a "fundamental requirement" of secondary considerations evidence that the proponent "must establish a nexus between the evidence and the merits of the claimed invention." *In re Kao*, 98 USPQ2d 1799, 1808 (Fed. Cir. 2011) (quoting

Wyers v. Master Lock Co., 95 USPQ2d 1525 (Fed. Cir. 2010)). The examiner previously determined that there was no nexus between the secondary considerations evidence and the claims. Upon further consideration, and in light of the Supplemental Zeiler Declaration, the examiner reconsiders and finds a sufficient nexus has been shown.

Patent owner's evidence is generally drawn to its V28 battery pack. While there can be no dispute that this is a battery pack of lithium-based cells for powering hand-held power tools, the examiner previously criticized the nexus between the claims and secondary considerations evidence because it was not shown how the V28 met the claimed requirement of providing a greater than approximately 20 amp average discharge current. The previous evidence focused primarily on voltage and weight. Upon further review, particularly in light of the additional explanation given in the Supplemental Zeiler Declaration, it is clear to the examiner that the cells of the V28 battery pack are capable of producing a greater than 20 amp average discharge current. Zeiler explains the various power requirements for hand held power tools and establishes that a greater than 20 amp current would be required for certain high power tools, such as hammer drills or saws. Supp. Zeiler Decl. ¶¶ 18-43. Zeiler also shows that the V28 was able to provide power to such tools. *Id.* ¶¶ 50-62. The examiner is satisfied that the V28 is an embodiment falling within the claims and therefore evidence concerning the V28 has a sufficient nexus with the claims.

Long-Felt Need and Failure of Others

Evidence of a long-felt need solved by the claimed invention can be evidence of non-obviousness. See MPEP 716.04 and cases cited therein. To establish long-felt need there must

be objective evidence that there has been a persistent need in the industry recognized by persons skilled in the art, the need has not been satisfied prior to the invention, and the invention in fact satisfies the need. See *id.* The Zeiler Declaration and Meyer Declaration show that there was a persistent long-felt need for lighter weight batteries that could provide sufficient current to operate power tools having high power requirements. Meyer Decl. ¶¶ 5-10; Zeiler Decl. ¶¶ 13-14. These declarations also show that the need was not satisfied by others and indeed that others had attempted but failed to satisfy the need. Meyer Decl. ¶ 11; Zeiler Decl. ¶¶ 15-16. The declarations finally show that the invention satisfied the need, as battery cells comprising lithium-based cells and providing greater than 20 amps in average discharge current were both lighter weight and provided higher power output than previous packs. Meyer Decl. ¶¶ 12-15; Zeiler Decl. ¶¶ 17-24. Again, the examiner's primary criticism of this evidence previously was the lack of a nexus between the evidence and the claims, but the evidence concerns the V28 and the examiner finds as above that there has now been shown a sufficient nexus between the claims and the V28 (and thus the evidence). The satisfaction of a long-felt need in the industry, as well as the failure of others to satisfy the need, is evidence of non-obviousness.

Praise

Praise in the industry which is linked with the claimed invention can be evidence of non-obviousness. *Power-One, Inc. v. Artesyn Techs., Inc.*, 94 USPQ2d 1241, 1246 (Fed. Cir. 2010). The Meyer Declaration listed numerous awards and industry praise received by the V28. Meyer Decl. ¶¶ 7-10. This praise is generally due to the V28 providing more power than similarly sized non-lithium based battery packs, thus it relates to the ability of lithium-based cells to provide

high average discharge currents in powering a hand held power tool. The evidence is therefore linked to the claimed invention, and is additional evidence of non-obviousness.

Commercial Success

It appears that the V28 has been commercially successful. Zeiler Decl. ¶¶ 25-30. But specifics, i.e. sales figures, or *actual numbers* relating to market share, etc., are not given, so the evidence is not particularly strong. For example, Zeiler makes vague assertions that sales, market share, and profit margins have "increased" and that market share is "large." This does not show that any increase is significant or that market share is large due to the claimed invention. In that vein, it is also not entirely clear, as indicated previously by the third party, to what extent such success is due to for example strong marketing rather than purely due to the claimed invention. It does appear though, as presented in the long-felt need section, that the industry *wanted* such a high power (i.e. high, over 20 amp, current producing) and lower weight (as comes from lithium-based cells) battery pack as is provided by the invention, and that this type of product has become the industry standard due to these improved characteristics (which are due to the claimed features). That the claimed invention yields distinct advantages over the previous, advantages caused by the claimed features, gives some credence to the notion that any commercial success was caused by the claimed invention, but again there is no evidence as to exactly how much success there has been. Any commercial success therefore has a trivial weight in the obviousness analysis.

Conclusion

The invention as claimed has achieved some level of commercial success, but there is not enough evidence to know how much or to give the success any meaningful weight in the obviousness analysis. Patent owner has, however, shown that there was a persistent and long-felt need in the industry, which others failed to solve but was solved by the claimed invention. Patent owner has also shown that the industry generally recognized the claimed invention with high praise. As discussed herein, the obviousness rejections are all withdrawn on the merits, but these secondary considerations are additional strong evidence in favor of finding the claims non-obvious.

Conclusion

This is an ACTION CLOSING PROSECUTION (ACP); see MPEP § 2671.02.

(1) Pursuant to 37 CFR 1.951(a), the patent owner may once file written comments limited to the issues raised in the reexamination proceeding and/or present a proposed amendment to the claims which amendment will be subject to the criteria of 37 CFR 1.116 as to whether it shall be entered and considered. Such comments and/or proposed amendments must be filed within a time period of 30 days or one month (whichever is longer) from the mailing date of this action. Where the patent owner files such comments and/or a proposed amendment, the third party requester may once file comments under 37 CFR 1.951(b) responding to the patent owner's submission within 30 days from the date of service of the patent owner's submission on the third party requester.

(2) Patent owner is not required to respond. If the patent owner does not timely file comments and/or a proposed amendment pursuant to 37 CFR 1.951(a), then the third party requester is precluded from filing comments under 37 CFR 1.951(b).

(3) Appeal **cannot** be taken from this action, since it is not a final Office action.

37 CFR 1.943(b) requires that "[r]esponses by the patent owner and written comments by the third party requester shall not exceed 50 pages in length, excluding amendments, appendices of claims, and reference materials such as prior art references." This page limit will be strictly enforced.

All correspondence relating to this *inter partes* reexamination proceeding should be directed:

By **U.S. Postal Service Mail** to:

Mail Stop *Inter Partes* Reexam
ATTN: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand to: Customer Service Window
Randolph Building
401 Dulany St.
Alexandria, VA 22314

Registered users of EFS-Web may alternatively submit correspondence via the electronic filing system at https://efs.uspto.gov/efile/myportal/efs-registered

Any inquiry concerning this communication or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

Signed:

/James Menefee/

Primary Examiner
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March 26, 2014

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