

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADC SOLUTIONS AUTO LLC,
Petitioner

v.

THE NOCO COMPANY,
Patent Owner.

Case IPR2024-00671
U.S. Patent No. 11,584,243

PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW

Pursuant to 37 C.F.R. § 42.75, Patent Owner The NOCO Company (“NOCO”) respectfully requests Director Review of the Board’s Final Written Decision (Paper 24, “FWD”) determining all challenged claims of U.S. Patent No. 11,584,243 (Ex. 1001, “the ’243 Patent”) to be unpatentable.

I. INTRODUCTION

Director Review is warranted because the Final Written Decision deviates from the issues actually presented in the Petition and argued at trial, thereby rendering the decision unreasonable. Patent Owner NOCO respectfully requests that the Final Written Decision be reversed and a determination that claims 1, 2, 15, 17, 18, 51, 54, and 57 are not unpatentable be made.

II. BACKGROUND

On March 12, 2024, ADC Solution Auto LLC (“ADC”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1, 2, 15, 17, 18, 51, 54, and 57 of the ’243 Patent. The ’243 Patent covers NOCO’s USB charging innovations for jump starters and discloses a portable vehicle jump starter having a battery pack that can be charged via a 5-volt USB input. *See* Patent Owner Response (“POR”), Paper 11, p. 2; Ex. 1001. As explained in the ’243 Patent, portable booster devices, often referred to as jump start devices or jump starters, include a high-discharge rechargeable battery that can be connected in circuit with a vehicle’s battery through a pair of cables in order to jump start the vehicle. *See* Ex. 1001, 1:13-16; POR, p. 3.

Previously, recharging a jump starter powerful enough to jump start a 12-volt car battery relied on a high-power charger through a specialized 12-volt plug connector, such as a barrel charger, as confirmed by Patent Owner's expert, Dr. Ayman Fayed. Ex. 2014, ¶ 23, *see* POR, pp. 3-4. But the '243 Patent discloses a jump starter with a "USB charge circuit 52 allows the internal lithium battery pack 32 to be charged using a standard USB charger." Ex. 1001, 7:32-33; *see* POR, p. 5.

In its Petition, ADC was not able to identify any prior art that teaches or suggests charging a jump starter device, or even a device having a comparable battery capacity, via USB. Instead, petitioner ADC presented obviousness grounds that combined prior art jump starters that used traditional charging means and separate prior art references that discussed USB voltage conversion in small electronics devices. *See* Pet., pp. 24-74 (detailing Grounds 1 and 2: Richardson in view of Zhao and, for some claims, Dao; and Grounds 3 and 4: Yu in view of Paparrizos and, for some claims, Dao); POR, p. 3.

On August 29, 2024, the Board granted institution of *inter partes* review of the '243 Patent. *See* Paper 7. In its post-institution briefing, Patent Owner NOCO responded, in part, and explained how:

Unlike small consumer electronics devices (*e.g.*, cellular phones, tablets, digital cameras), a jump starter must generate a massive amount of current for a very short period of time in order to jump start a

commercial vehicle. This requires a high-capacity rechargeable battery that is much larger than those used in a typical consumer electronic device. Yet, Petitioner argues that because it was known to boost a 5V USB voltage to charge a higher-voltage battery in a small consumer electronics device, a PHOSITA would have been somehow motivated to do the same for the high-capacity battery in a jump starter. By treating a high-powered jump starter the same as a small consumer electronic device, Petitioner ignores that a jump starter requires a very high capacity battery. A PHOSITA would have understood that the power limitations associated with traditional USB made charging the battery of a high-powered tool, such as a jump starter, counterintuitive in July of 2014 (the priority date of the '243 Patent).

POR, p. 2; *see* POR, pp. 19-34, 39-46.

Petitioner ADC responded by presenting arguments and evidence, including charging time calculations, that attempted to show that Patent Owner NOCO “misreprent[ed] jump starter battery capacity and charging times.” Petitioner’s Reply (“Rep.”), Paper 14, p. 4, *see id.* at pp. 4-7, 15-16. These calculations and Petitioner’s arguments were subsequently discredited by Patent Owner NOCO in its sur-reply. *See* Patent Owner’s Sur-Reply, Paper 17, pp. 2-14. This discussion of charging times and whether a PHOSITA would have considered USB to be a suitable charging solution for a portable vehicle jump starter remained the core dispute between the parties at all times throughout trial. For example, Petitioner ADC noted that “[a]

linchpin of NOCO's argument against the combination of Richardson and Zhao is that USB charging times would not be 'reasonable.'" Rep., p. 15.

After both parties submitted extensive briefing, evidence, and oral argument testimony on this key issue, the Board issued its Final Written Decision on July 26, 2025, holding all challenged claims unpatentable. *See* Paper 24.

III. LEGAL STANDARD FOR DIRECTOR REVIEW

"Requests for Director Review of a Board's final decision under 35 U.S.C. §§ 135, 318, or 328, decisions granting rehearing of such a decision, or any other decision concluding a proceeding brought under 35 U.S.C. §§ 135, 311, or 321, shall be limited to decisions presenting (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law." *See* Director Review Process at 2.B, Availability of Director Review: Proceedings under part 42 of 37 C.F.R. (last modified August 12, 2025). An abuse of discretion is found if a decision: (1) is clearly unreasonable, arbitrary, or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact finding; or (4) involves a record that contains no evidence on which the Board could rationally base its decision. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016).

IV. ARGUMENT

Patent Owner NOCO respectfully submits that the Final Written Decision represents an abuse of discretion because the decision fails to adequately address the core issue disputed between the parties at trial. The FWD fails to evaluate whether a POSITA would have modified the prior art systems of Richardson and Yu to include a USB charger instead of traditional charging techniques, which was the fundamental inquiry presented by Petitioner ADC's obviousness grounds. Accordingly, the reasoning of the FWD represented an improper departure from grounds presented in the Petition and the issues addressed at trial.

In order to understand the FWD's misstep, it must be appreciated that the FWD has chosen to focus on only one of two modifications outlined in the Petition to the primary prior art references. As discussed, for both of the two obviousness grounds of the Petition, a reference detailing a traditional jump starter was combined with an unrelated reference describing USB charging techniques. *See* Pet., pp. 24-74 (discussing Grounds 1 and 2: Richardson in view of Zhao; and Grounds 3 and 4: Yu in view of Paparrizos). In particular, Petitioner argued that a person of ordinary skill in the art would have been motivated to modify the primary references of Richardson (Grounds 1-2) and Yu (Ground 3-4) to either "(1) replace the existing charging circuitry" with a USB input circuit, or (2) add a USB input circuit as "an additional and alternatively [sic] pathway for charging." Pet., p. 42; *see id.* at p. 60.

The FWD focuses only on the latter modification when determining that Petitioner ADC has demonstrated adequate motivation to combine the references.

The FWD recognized that “the crux of Patent Owner’s argument is that because of Richardson’s goal of charging high capacity batteries a USB charger would require significant charging time.” FWD, p. 23 (citing POR, pp. 29-30). But rather than properly weigh the evidence to determine whether a POSITA would have modified Richardson’s system to include a USB charger over a traditional barrel charger, the Board recrafted Petitioner’s Grounds into an extreme hypothetical situation where a PHOSITA would have no other charging options available to them. *See* FWD, p. 23. Specifically, the FWD deviated from the Petition and fabricated a strawman argument where a PHOSITA, “*when faced with no alternative,*” would have “balance[d] the trade-offs and consider[ed] charging slowly, *or not at all.*” FWD, p. 23 (emphases added). This was not the motivation to combine reasoning that was asserted in the Petition and argued at length by the parties during trial.

The proper analysis is not a selection between including a secondary USB charger versus including no secondary charger at all, but rather between including USB or other traditional charging techniques that were known to be appropriate for jump starters. In other words, a PHOSITA was not “faced with no alternative” when considering the Petition’s proposed modification of adding an additional charging pathway to Richardson and Yu; rather, a PHOSITA could have considered

including, for example, a barrel charger port as secondary charging source. Therefore, even if a PHOSITA desired to “add[] the convenience and flexibility of a secondary charging method” for when “the primary and faster charging path [of Richardson] is unavailable” (FWD, p. 23, n.11), the FWD fails to explain *why* USB would have been selected among the available charging options.

Thus, the FWD fails to engage with the actual issue disputed between the two parties; namely, whether a PHOSITA would have found it obvious to modify Richardson's system to include USB charging either in place of, or in addition to, its existing AC charging circuitry. Instead of considering what a PHOSITA designing a portable jump starter would have actually considered obvious to include, the Board sidestepped this core issue and considered only whether one would include a secondary USB charger if that were the only option available. Rather than considering how a PHOSITA would have viewed the various charging options known in the art, the FWD jumps to the conclusion that USB charging would technically work for a portable jump starter if “given sufficient time.” FWD, p. 23. As Patent Owner explained in its briefing, there is a distinction between what is possible, and what would have been obvious to a PHOSITA at the time. *See* POR, p. 26 (discussing whether it would have been obvious to charge a full-size electric vehicle battery using USB).

The Board's rationale reflects precisely the type of hindsight-driven, ex post reasoning that the Supreme Court has warned against. In *KSR*, the Court cautioned that "[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). By reimagining what a skilled artisan might have done "if no alternatives existed," the Board substitutes its own logic for what the prior art taught or suggested, applying the wrong legal framework. Again, there is no prior art evidence in the record that teaches or suggests USB charging of portable jump starters, or any comparable high-capacity battery devices.

The Board's analysis of Grounds 3 and 4, involving obviousness combinations based on Yu and Paparrizos, is even more deficient than Grounds 1 and 2 in this respect. Nowhere in its discussion of Grounds 3 and 4 does the Board even address the increased charging times associated with USB that Patent Owner repeatedly explained would have prevented a PHOSITA from making the proposed combination of Grounds 3 and 4, despite this being the key issue that was disputed between parties at trial. Instead, the Board focuses predominantly on discussing Paparrizos systems. *See* FWD, p. 39 ("As Petitioner states, USB technology was in-demand and well-known Therefore, Petitioner has provided sufficient reasoning with rational underpinnings to explain why a person of ordinary skill in the art would have had reason to combine the teachings of Yu and Paparrizos."). This evaluation

of Paparrizos and the potential benefits of USB charging, whether correct or not, avoids the core issue presented to the Board.

In essence, the Board has effectively changed the Petition's original theory that it would be obvious to add USB charging to Richardson and Yu into a new theory that it would be obvious to add USB if that was the only option available to a skilled artisan. But an agency “‘may not change theories in midstream without giving respondents reasonable notice of the change’ and ‘the opportunity to present argument under the new theory.’” *Genzyme Therapeutic Prod. Ltd. P’ship v. Biomarin Pharm. Inc.*, 825 F.3d 1360, 1366 (Fed. Cir. 2016) (quoting *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015)). Patent Owner NOCO was never on notice that the real analysis that the Board would be undertaking was not evaluating whether a POSITA would have added USB charging to the systems of Yu or Richardson, but rather whether a POSITA would have considered USB to be technically functional if there were no other alternatives available.

Because the FWD fails consider the actual dispute between parties, the decision outlined therein is unreasonable and warrants Director Review. *See Nearmap US, Inc., v. Eagle View Tech., Inc.*, IPR2022-00734, Paper 43, p. 7 (P.T.A.B. February 20, 2024) (vacating a Final Written Decision where “the Board did not provide adequate reasoning to support its conclusion of nonobviousness, nor did it adequately address the disputed issues”).

Additionally, this decision is at odds with many of the findings in IPR2020-00944 involving related patent U.S. Patent No. 9,007,015 (“’015 Patent”), which included a dependent claim related to USB charging features that was held to be patentable and affirmed as such on appeal to the Federal Circuit. *The NOCO Company, Inc. v. Shenzhen Caraku Tech. Co., Ltd.*, Appeal Nos. 2022-1646, 2022-1741, 2024 U.S. App. LEXIS 3221 (Fed. Cir. Feb. 12, 2024) (Ex. 1014); *see* POR, pp. 13-14. In that former IPR proceeding, the petitioner based its grounds, in part, on Richardson and provided analogous reasoning for the motivation to combine; namely, that “[a] POSITA would be motivated to provide such a USB charging port to provide the added convenience to users of using another commonly used power input for charging the jump starter device.” Ex. 1014, p. 92 (italicization omitted). But the board rejected that argument, recognizing that “[t]he matter is much more complicated than what [p]etitioner’s argument makes it out to be.” *Id.* at p. 93. In particular, the board stated that Petitioner’s expert did “not identify any jump starter device having a USB input charging port.” *Id.* While the FWD is correct to identify this proceeding as containing some new evidence (*see* FWD, p. 42, n. 12), given the different outcomes when presented with similar factual issues, the present Final Written Decision nevertheless hinders the PTAB’s policy goal of finality and risks promoting serial IPR gamesmanship.

V. CONCLUSION

For these reasons, Patent Owner NOCO respectfully requests that the
Director grant review and reverse the Board's Final Written Decision.

Dated: September 24, 2025

/Joseph M. Sauer/

Joseph M. Sauer, Reg. No. 47,919
JONES DAY
901 Lakeside Avenue
Cleveland, Ohio 44114
(216) 586-7506
jmsauer@jonesday.com

David B. Cochran, Reg. No. 39,142
JONES DAY
901 Lakeside Avenue
Cleveland, Ohio 44114
(216) 586-7029
dcochran@jonesday.com

Matthew W. Johnson, Reg. No.
59,108
JONES DAY
500 Grant Street, Suite 4500
Pittsburgh, PA 15219
(412) 394-9524
mwjohnson@jonesday.com

John M. Graves, Reg. No. 77,147
JONES DAY
90 South Seventh Street, Suite 4950
Minneapolis, MN 55402
(612) 217-8800
jgraves@jonesday.com

Attorneys for The NOCO Company

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned hereby certifies the foregoing document, PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW, was served via electronic mail on the date below, upon the following:

Lead Counsel:	Back-up Counsel
Daisy Manning Reg. No. 66,369 HUSCH BLACKWELL LLP 8001 Forsyth Boulevard, Suite 1500 St. Louis, MO 63105 (314) 480-1500 Telephone (314) 480-1505 Facsimile PTAB-DManning@huschblackwell.com	Paul L. Smelcer Reg. No. 74,975 HUSCH BLACKWELL LLP 8001 Forsyth Boulevard, Suite 1500 St. Louis, MO 63105 (314) 480-1500 Telephone (314) 480-1505 Facsimile paul.smelcer@huschblackwell.com

Dated: September 24, 2025

/Joseph M. Sauer/

Counsel for Patent Owner