UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/499,438	09/29/2014	THOMAS KOMMA	2013P19772	9371

27350 7590 06/18/2020

LERNER GREENBERG STEMER LLP
Box SA
P.O. BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER	
RANKINE, TARIKH KANEM	

ART UNIT	PAPER NUMBER
2859	

NOTIFICATION DATE	DELIVERY MODE
06/18/2020	ELECTRONIC

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.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

boxsa@patentusa.com
docket@patentusa.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS KOMMA and MONIKA POEBL

Appeal 2019-004121
Application 14/499,438
Technology Center 2800

Before ROMULO H. DELMENDO, MICHAEL P. COLAIANNI, and RAE LYNN P. GUEST, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant[1] appeals under 35 U.S.C. § 134(a) from the Primary Examiner's final decision to reject claims 1–9.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

---

[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42—namely, "SIEMENS AKTIENGESELLSCHAFT" (Application Data Sheet filed September 29, 2014 at 4), which is also identified as the real party in interest (Appeal Brief filed October 22, 2018 ("Appeal Br.") at 1).

[2] *See* Appeal Br. 5–14; Final Office Action entered April 27, 2018 ("Final Act.") at 3–11; Examiner's Answer entered February 8, 2019 ("Ans.") at 3–5.

I. BACKGROUND

The subject matter on appeal relates to a "charging configuration"[3] for wireless charging of an electrically-operated vehicle (Specification filed September 29, 2014 ("Spec.") ¶ 2). Figures 1 and 2 (annotations added), which are illustrative of the claimed subject matter, are reproduced from the Drawings filed September 29, 2014, as follows:

FIG. 1

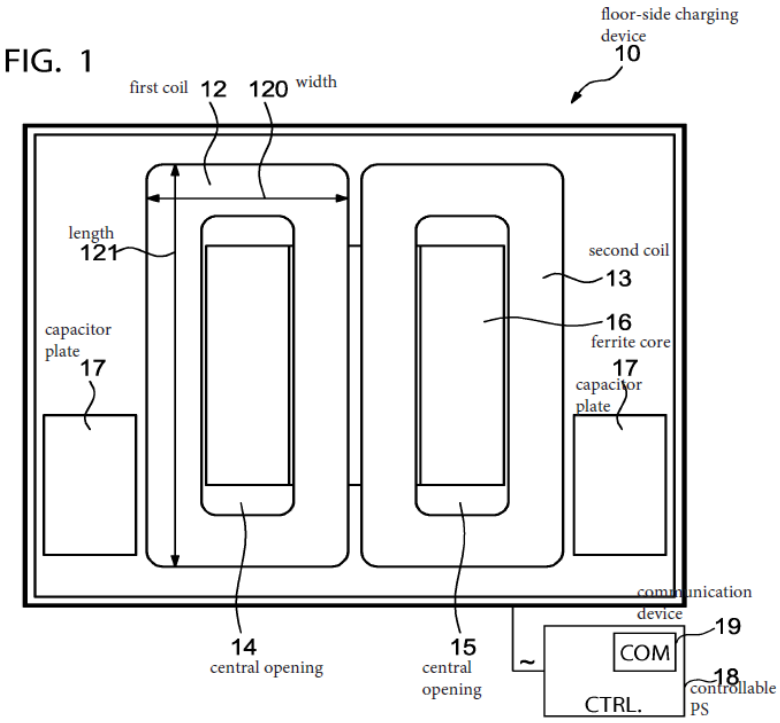
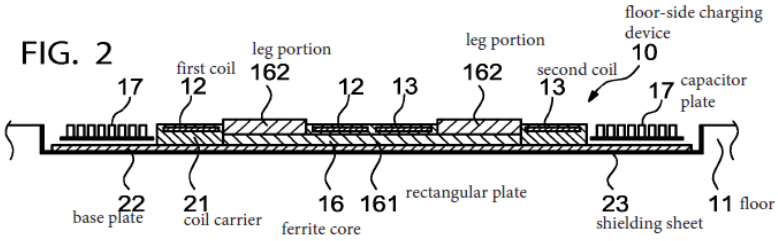


FIG. 2



[3] Although "configuration" is normally understood as a "relative *arrangement* of parts or elements" (https://www.merriam-webster.com/dictionary/configuration; emphasis added), it appears that the term, in its present context, has been construed to be specifying a device or apparatus that comprises the elements recited in claim 1 below.

Figures 1 and 2 above depict a top view and a side view, respectively, of a charging device **10** installed in a recess formed in a floor **11** and "configured" for inductive emission of energy to charge a vehicle (not shown), wherein the charging device **10** includes, *inter alia*, a wound first coil **12** with a central opening **14**, a wound second coil **13** with a central opening **15**, a U-shaped ferrite core **16** with leg portions **162** that extend into central openings **14** and **15**, a shielding sheet **23**, and coil carriers (holders) **21** (*id.* ¶¶ 20–30).

Representative claim 1, the sole independent claim on appeal, is reproduced from the Claims Appendix to the Appeal Brief, as follows:

> 1. A charging configuration for inductive wireless transfer of energy to a receiving coil of an electrically operated vehicle, the charging configuration comprising:
>
> a first circularly wound electrically conductive coil extending in a given plane and having a first central opening formed in a center of said first coil;
>
> a second circularly wound electrically conductive coil extending in a given plane and having a second central opening formed in a center of said second coil;
>
> said first and second coil having a bottom edge and being disposed in a coplanar relationship;
>
> *a ferrite core being U-shaped and having a first leg extending into said first central opening of said first coil and a second leg extending into said second central opening of said second coil, said second leg disposed opposite said first leg*;
>
> a shielding sheet with a rectangular base plate supporting said ferrite core and said coplanar coils thereon; and
>
> a coil holder configured to hold said first and second coils on said shielding sheet to maintain a distance of between 15 and 25 mm between said shielding sheet and said bottom edge of said coils.

(Appeal Br. 16 (emphasis added)).

II. REJECTIONS ON APPEAL

The claims on appeal stand rejected under 35 U.S.C. § 103, as follows:

A. Claims 1–8 as unpatentable over Farkas[4] in view of Kobayashi et al.[5] ("Kobayashi") and Morita et al.[6] ("Morita"); and

B. Claim 9 as unpatentable over Farkas in view of Kobayashi and Morita, and further in view of Partovi.[7]

(Final Act. 3–11; Ans. 3–5).

III. DISCUSSION

The Examiner finds that Farkas describes a "charging configuration" comprising a first circularly wound electrically conductive coil extending in a given plane and having a first central opening formed in a center of the first coil, a second circularly wound electrically conductive coil extending in a given plane and having a second central opening formed in a center of the second coil, and a ferrite core (Final Act. 3–4). The Examiner acknowledges that, in contrast to claim 1, Farkas does not disclose: (1) a U-shaped ferrite core having a first leg extending into the first central opening of the first coil and a second leg extending the second central opening of the second coil; (2) a shielding sheet with a rectangular base plate supporting the ferrite core and the coplanar coils; and (3) a coil holder configured to hold the first and second coils on the shielding sheet to maintain a distance (*id.* at 4). To

---

[4] US 2008/0265684 A1, published October 30, 2008.

[5] US 2002/0171525 A1, published November 21, 2002.

[6] US 2008/0129246 A1, published June 5, 2008.

[7] US 2014/0191568 A1, published July 10, 2014.

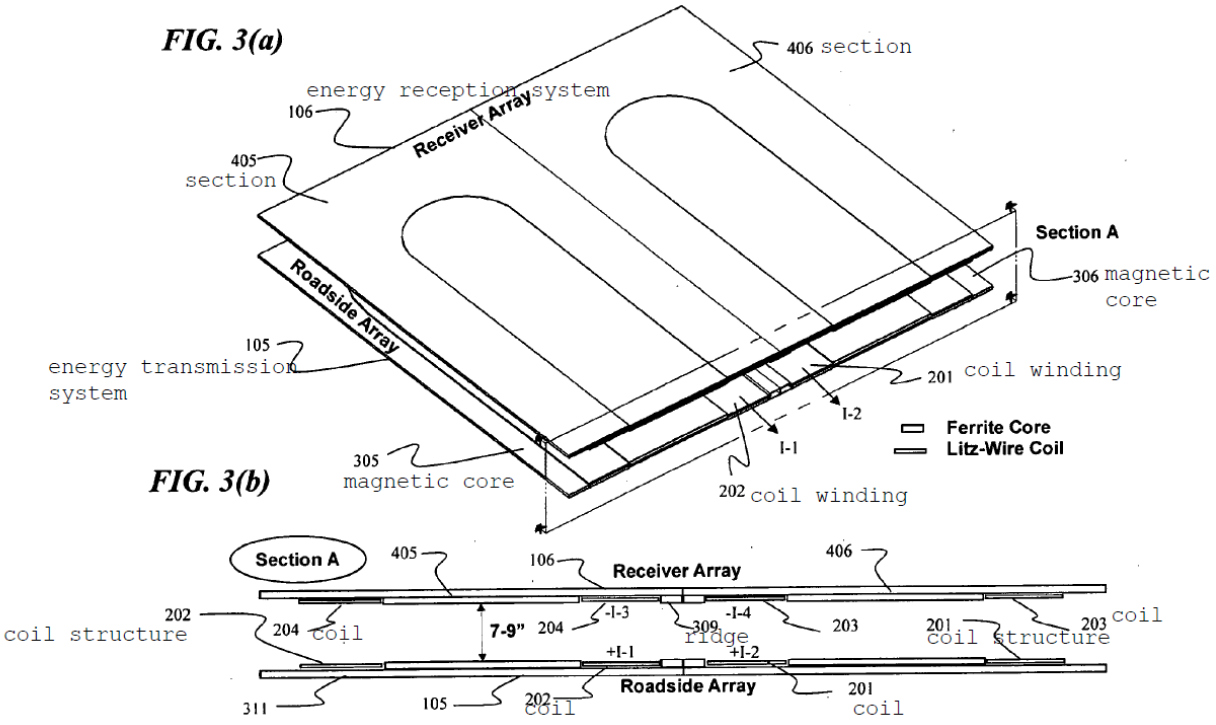
resolve these differences, the Examiner relies mainly on Kobayashi, which, in the Examiner's view, teaches claim 1's limitations that are lacking in Farkas (*id.* at 4–5). Based on these findings, the Examiner concludes that "[i]t would [have been] obvious to one of ordinary skill in the art . . . to modify [the] ferrite core and the first and second coils taught by Farkas to have [a] U-shaped core, a shielding sheet and [a] coil holder taught by ***Kobayashi*** for the purpose of easy transmission of high voltages" (*id.* at 6 (citing Farkas ¶ 16)). The Examiner relies on Morita for its teaching regarding a rectangular base plate (*id.* at 6). The Examiner also concludes that the distance range between the shielding sheet and the bottom edge of the coils (between 15 and 25 mm) would have been obvious to a person having ordinary skill in the art as a matter of design choice because it would have involved a mere change in size (*id.* at 7).

The Appellant contends, *inter alia*, that a person having ordinary skill in the art would not have been motivated to modify the charging apparatus disclosed in Farkas based on Kobayashi's disclosure because Kobayashi relates to an electromagnetic forming apparatus operating at relatively high voltages and high current voltage pulses at a high frequency to press a material such as aluminum into a required shape (Appeal Br. 7–10). According to the Appellant, the prior art references would not have suggested that Kobayashi's high voltage, high current system would be useful or desired in a charging apparatus as disclosed in Farkas, and, in fact, such parameters as disclosed in Kobayashi may likely be damaging when implemented in the charging of a battery (*id.* at 9–12). The Appellant also argues that even if it would have been obvious to modify the charging apparatus disclosed in Farkas based on Kobayashi's teachings, the first and

second coils of the resulting combination would be circularly wound around the circular circumferences of the opposite legs of the U-shaped core, and, therefore, neither coil would be "extending in a given plane" as required by claim 1 (*id.* at 6).

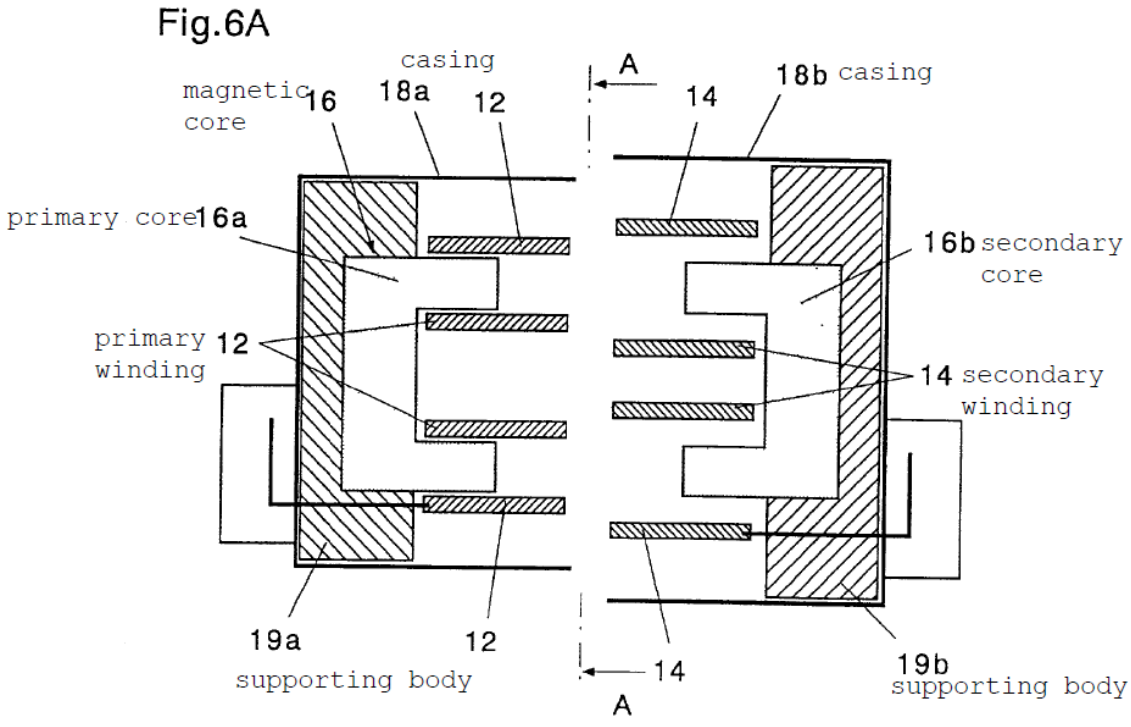
We agree with the Appellant because the Examiner's rejection fails to articulate a sufficient reason with some rational underpinning to support the conclusion that a person having ordinary skill in the art would have combined Farkas and Kobayashi in the manner claimed. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Farkas describes a roadside array energy transmission system **105** for wirelessly charging a vehicle's onboard energy storage device unit **115** in Figures 1–3, of which Figures 3(a) and 3(b) (some annotations added) are reproduced, as follows:



Figures 3(a) and 3(b) above depict a perspective view and a cross-sectional view of a roadside array and a receiver array, wherein the roadside array includes an energy transmission system **105** comprising, *inter alia*, conductive coil windings **201** and **202** and ferrite cores (not labeled) situated in the middle (Farkas ¶¶ 13, 33–35).

By contrast, Kobayashi teaches a continuous pressing equipment with which material such as aluminum may be processed into a prescribed complicated shape using a small number of press machines, wherein the continuous pressing equipment is a tandem press or a transfer press with a plurality of press machines, using an electromagnetic forming apparatus provided within at least one press machine or between pressing machines (Kobayashi ¶¶ 7–8, 10). Specifically, Kobayashi's Figure 6A (annotations added) is reproduced as follows:



Kobayashi's Figure 6A above shows a sectional arrangement of an electromagnetic connector **10** (not labeled) shielded in two separate casings

18*a* and **18***b* provided with, *inter alia*, a primary core **16***a*, a secondary core **16***b*, and primary windings **12** and secondary windings **14** molded into supporting bodies **19***a* and **19***b*, respectively (*id.* ¶¶ 51, 53–54). Kobayashi's system configuration provides "an intense magnetic field . . . required to produce sufficient processing force" to effect magnetic forming of a metal workpiece (*id.* ¶¶ 39, 56).

Thus, although Kobayashi does show vertically disposed, U-shaped cores **16***a* and **16***b* that extend into the axial openings of windings **12** and **14** (Kobayashi Figure 3), it does so for a reason unrelated to wireless charging of a vehicle battery as disclosed in Farkas—i.e., to shape a metal workpiece to a predefined complicated shape using relatively high voltage and high current. The Examiner does not direct us to sufficient evidence that the limitations missing in Farkas (e.g., a U-shape ferrite core) would provide any advantage or effect in a wireless charging system as disclosed in Farkas. Therefore, the Examiner's contrary conclusion that the limitations missing in Farkas would provide "easy transmission of high voltages" (Final Act. 6) or "a stronger magnetic field for wireless power transmission" (Ans. 4–5) is not supported by sufficient evidence or technical reasoning. Indeed, as the Appellant argues (Appeal Br. 9–10), the Examiner does not explain how the features shown in Kobayashi can be implemented in Farkas without potentially damaging the vehicle's energy storage device or other parts of the vehicle itself. *In re NuVasive, Inc.*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) ("'[C]onclusory statements' alone are insufficient and, instead, the finding must be supported by a 'reasoned explanation.'" (internal citation omitted)).

The remaining references have not been cited to cure the deficiencies in the Examiner's basic combination of Farkas and Kobayashi. Accordingly, we cannot uphold the Examiner's stated rejections.

IV. CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–8	103	Farkas, Kobayashi, Morita		1–8
9	103	Farkas, Kobayashi, Morita, Partovi		9
Overall Outcome				1–9

REVERSED