

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SURE-FIRE ELECTRICAL CORPORATION,¹
Petitioner,

v.

YONGJIANG YIN and SHENZHEN EL LIGHTING CO. LTD.,
Patent Owner.

Case IPR2014-01448
Patent 7,671,279 B2

Before DEBRA K. STEPHENS, JENNIFER S. BISK, and
PETER P. CHEN, *Administrative Patent Judges*.

DEBRA K. STEPHENS, *Administrative Patent Judge*.

DECISION ON REQUEST FOR REHEARING

Institution of *Inter Partes* Review

37 C.F.R. § 42.108

¹ Best Buy Stores L.P. and BestBuy.com have been terminated from this proceeding. Paper 24.

I. INTRODUCTION

A. Background

Sure-Fire Electrical Corp., Best Buy Stores L.P., and BestBuy.com, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1 and 7 of U.S. Patent 7,671,279 B2 (Ex. 1001, “the ’279 Patent”). 35 U.S.C. § 311. Yongjiang Yin and Shenzhen EL Lighting Co. Ltd (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”).

On March 4, 2014, we instituted an *inter partes* review (Paper 13, “Decision” or “Dec.”) of claims 1 and 7 under 35 U.S.C. § 103 based on obviousness over Gustafsson and He (“Assertion 1”). We determined, based on the record before us, Petitioner had not demonstrated a reasonable likelihood of prevailing on its assertion that claims 1 and 7 are anticipated by Naghi. We also declined to institute an *inter partes* review of claims 1 and 7 under 35 U.S.C. § 103 based on obviousness over He and Korodi or Currie (“Assertion 2”) because Petitioner did not explain adequately the relative strengths or weaknesses of its asserted grounds. Dec. 20.

Petitioner timely filed a Request for Rehearing (Paper 15, “Req. Reh’g”). Patent Owner, pursuant to our authorization, filed an Opposition to Request for Rehearing (Paper 19, “Opp. Reh’g”).

In a request for rehearing, the dissatisfied party must identify, specifically, all matters the party believes the Board misapprehended or overlooked, and the place where each matter was addressed previously. 37 C.F.R. § 42.71(d).

We have considered Petitioner’s request. Although we determine Petitioner did not fully explain Assertion 2 in the Petition (Pet. 5, 16, 34), we

agree that sufficient argument was provided. Therefore, in light of Patent Owner's proffered defense (Prelim. Resp. 11, 17, 20, 30, 32), predicated on antedating the prior art references, we grant the rehearing in part.

Specifically, for the reasons described below, we institute an *inter partes* review of claims 1 and 7 based on obviousness over He and Korodi; however, we again decline to institute an *inter partes* review of claims 1 and 7 based on obviousness over He and Currie.

B. The Prior Art Relied Upon for Assertion 2

Petitioner relies upon the following prior art references:

Reference	Patent No.	Date of Issue	Date of Filing	Exhibit No.
He	US 6,957,001 B2	Oct. 18, 2005	Jan. 29, 2004	Ex. 1004
Korodi	US 3,942,859	Mar. 9, 1976	Nov. 11, 1974	Ex. 1005
Currie	US 7,121,707 B2	Oct. 17, 2006	Sep. 24, 2004	Ex. 1007

C. Illustrative Claim

Both of the challenged claims, claims 1 and 7, are independent claims. Claim 1, reproduced below, is illustrative:

1. A current-seen cable, includes a driver, a main cord, a bare metal wire, a plurality of electroluminescence cored bars or electroluminescence cored cords and an outer transparent plastic layer, wherein said a plurality of electroluminescence cored bars or electroluminescence cored cords are arrayed abreast and are intertwined helically in sequence to form an electroluminescence cable, the bare metal wire is arranged in the center of the current-seen cable or lateral to the current seen cable and is in contact with a

conductive layer of each electroluminescence cored bar or electroluminescence cored cord; a metal base strip of each electroluminescence cored bar or a conductive wire of each electroluminescence cored cord and the bare metal wire are connected to each corresponding end of a multi-group AC output of the driver respectively; the main cord is arranged in the centre axis of the current-seen cable or lateral to the current-seen cable; said current-seen cable, said bare metal wire and said main cord are encapsulated in the outer transparent plastics layer; every electroluminescence cored bar or electroluminescence cored cord is driven by the driver and emits light in sequence when the main cord and the driver are live.

Ex. 1001, 7:20–40.

II. DISCUSSION

Petitioner seeks rehearing only as to the obviousness assertions relying on He and Korodi, and He and Currie. Req. Reh’g 1. Specifically, Petitioner asserts these grounds are necessary in addition to Assertion 1, in light of Patent Owner’s swear-behind defense, because the prior art combination in Assertion 2 would not be subject to the same potential swear-behind arguments as for Assertion 1. *Id.* at 3. Petitioner requests including Assertion 2 in the *inter partes* review because, if not included and Patent Owner successfully swears behind Gustafsson, “the ’279 patent could survive the IPR based only on a priority defense while a substantive assessment of the validity of the ’279 patent (the primary purpose of an IPR) will not have been conducted.” *Id.* at 4.

Petitioner provides the following chart, which we label as Chart 1.
Req. Reh'g 4.

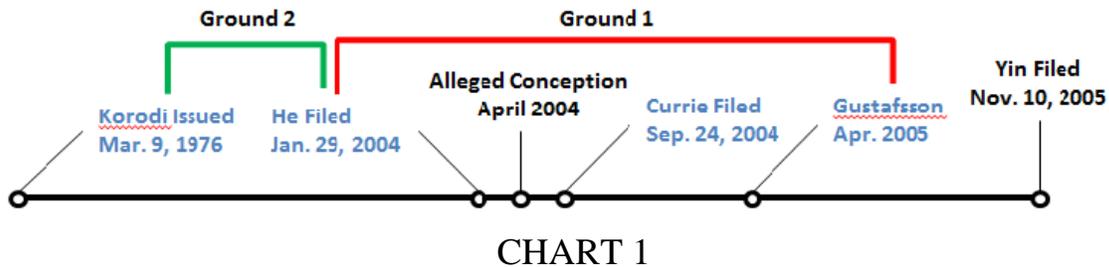


Chart 1 illustrates the relevant dates for the '279 Patent and each prior art reference relied upon in the asserted grounds.

Patent Owner opposes the request to include Assertion 2 in the *inter partes* review. Opp. Reh'g 3. Patent Owner asserts the Rehearing Request attempts to add new arguments and does not explain how priority dates for the references of Assertion 2 makes a meaningful distinction over Assertion 1. *Id.* at 3, 6.

We have considered Petitioner's request and grant the rehearing in part. We have reconsidered the Petition regarding Assertion 2 and Petitioner's arguments set forth in the Request for Rehearing. We agree with Petitioner that if Patent Owner were able to prove a conception date "at least as early as April 2004" and diligence from conception date to reduction to practice, Gustafsson would not be considered prior art under 35 U.S.C. § 103. Additionally, as noted by Petitioner, the asserted ground based on He and Korodi would add only one additional reference to the *inter partes* review. Req. Reh'g 6. Thus, we determine any additional burden on Patent Owner in responding further to Assertion 2 is outweighed by the goal of providing an efficient and cost-effective resolution of this matter. In light of

this determination, we have reconsidered the arguments set forth in the Petition (Pet. 34–49) and Preliminary Response (Prelim. Resp. 7–17, 32–34), for Assertion 2, as set forth below. As a result of this reconsideration, we modify our Decision to include the institution of an *inter partes* review of claims 1 and 7 based on obviousness over He and Korodi.

A. Obviousness over He and Korodi

Petitioner argues claims 1 and 7 of the '279 patent are obvious over He and Korodi.

1. Overview of He (Exhibit 1003)

He describes a color-changing and multi-colored electroluminescence cable. Ex. 1004, Abstract. A plurality of electroluminescence filaments are insulated from each other and helically wound on the outer side of the axis.

Id.

Figure 1 is reproduced below:

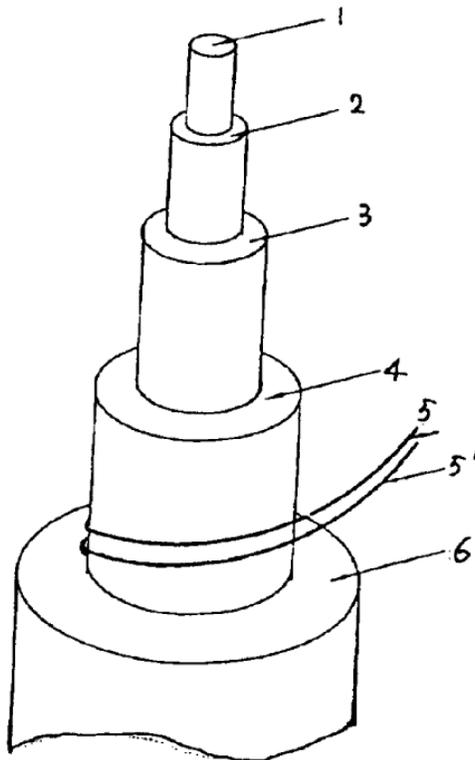


Figure 1 is a schematic diagram illustrating the structure of an individual electroluminescence filament of He. *Id.* at 3:25–27. As illustrated, the electroluminescence filament comprises color polymer casing tube disposed on transmission wires 5 and 5', and the outer surface of conductive layer 4. *Id.* at 3:54–56. Transmission wires 5 and 5' are wound at intervals on conductive layer 4. *Id.* at 3:52–53. Conductive layer 4 is coated on light emitting layer 3, which is coated on medium insulating layer 2. *Id.* at 3:50–51. Medium insulating layer 2 is coated on core wire 1 which is led out as an electrode. *Id.* at 3:46–47.

Figure 2 is reproduced below:

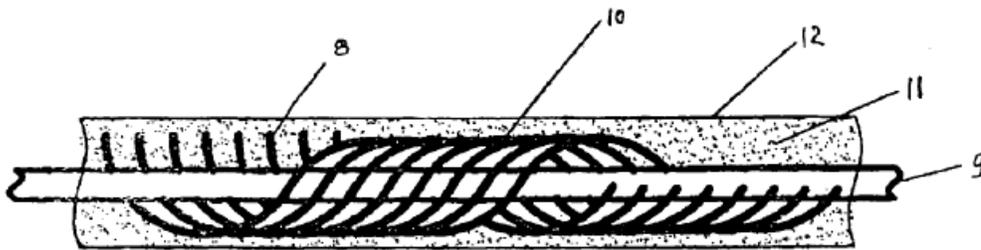


Figure 2 is a schematic diagram of an embodiment of the electroluminescence cable. *Id.* at 3:28–30. Electroluminescence cable 12 comprises a transparent polymer casing tube 11 disposed on the outer side of a group of electroluminescence filaments 10. *Id.* at 4:21–23. The group of electroluminescence filaments includes individual electroluminescence filaments 8 insulated from each other and helically wound on the outer side of core wire 9 which acts as a central axis. *Id.* at 4:16–19. Each of the electroluminescence filaments 8 connects with programmable electronic elements that control each electroluminescence filament 8, respectively, to emit light. *Id.* at 4:25–30.

2. Overview of Korodi (Exhibit 1005)

Korodi describes a safety power conductor that includes light-emitting means used for signaling the location of the conductor and the presence of an electrical potential in the conductor with respect to ground. Ex. 1005, Abstract. A power cord comprising a conductor, having an insulated covering, is illuminated laterally by light that is emitted when current is applied. *Id.* at Abstract, 1:57–62, 3:39–44.

Figure 1 is reproduced below.

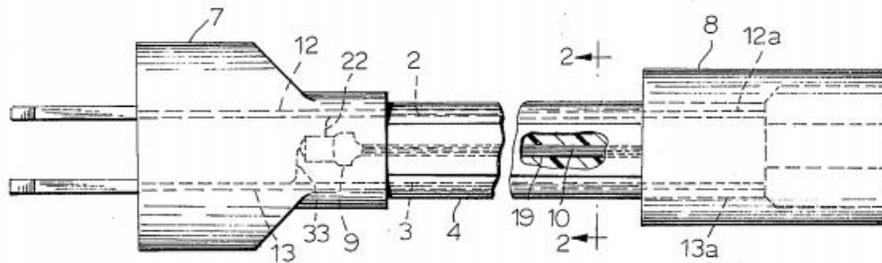


FIG. 1

Figure 1 is a side view of an embodiment of the present invention. As shown in Figure 1, electrical line or cable 1 has a pair of parallel electrical conductors 2 and 3 separated and insulated by insulating covering 4. *Id.* at 2:55–59. Insulating covering 4 is at least partially transparent to light, and that transparent zone extends between optical fibers 10 in channel 19 and the external surface of the cable covering. *Id.* at 2:55–59, 3:32–44. This structure permits transmission of light from bulb 9, via optical fibers 10, to the exterior of the cable along its length. *Id.* at 3:32–38. The conductor, including the light-emitting means, signal location of the conductor and presence of an electrical potential in the conductor with respect to an electrical base or ground. *Id.* at Abstract.

3. *Analysis*

a. Patent Owner's Argument of Improper Combination

Petitioner states He provides an illuminated electroluminescent cable “that fits seamlessly with the illuminated power cord[] disclosed in Korodi.” Pet. 35. According to Petitioner, He discloses a cable with EL wires intertwined helically on a metal core wire and circuitry for driving the wires such that light appears to flow through the cable. *Id.* Petitioner then asserts an ordinarily skilled artisan would have found replacing the aluminum core wire in He with a power cord, thereby “creating an improved illuminated cable using EL wires that light in sequence to indicate the presence of current,” to be obvious. *Id.* at 36. Petitioner further contends that combining the teachings of He and Korodi would have been the merger of familiar elements according to their established functions, known methods, and predictable results. *Id.*

Patent Owner asserts Petitioner provides no articulation of any motivation to combine the teachings of He and Korodi beyond conclusory statements. Prelim. Resp. 30. Patent Owner additionally contends Petitioner provided no evidence that the teaching of He and Korodi are “readily compatible” or combining the teachings would have been a predictable variation of devices. *Id.* Moreover, according to Patent Owner, Korodi only discusses devices that illuminate when a voltage differential exists. *Id.* at 30–31. Patent Owner asserts the devices would not “fit seamlessly,” as He discloses illumination wrapped around a metal core, whereas Korodi provides illumination from a central light source and has metal wires outside the illuminated channel carrying light down the cable, not in the center. *Id.* Patent Owner also argues that “bare metal wire” is misinterpreted. *Id.*

Lastly, Patent Owner contends, Petitioner has not explained why such a simple combination had failed to occur despite the field of lighted cables and electroluminescence wires coexisting for more than thirty years. *Id.* at 31.

Based on the record before us, we are persuaded Petitioner has shown a reasonable likelihood that an ordinarily skilled artisan would have been motivated to combine the teachings of He and Korodi. Specifically, we determine, based on the current record, Petitioner has articulated reasoning with a rational underpinning as to why an ordinarily skilled artisan would have been motivated to combine the teachings. “[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). We credit Dr. Horenstein’s testimony that an ordinarily skilled artisan would have found it obvious simply to replace the aluminum core wire in He with a power cord as taught by Korodi. Ex. 1008 ¶¶ 99, 102.

We additionally are persuaded, on the record before us, that the combination of He and Korodi unites old elements with no change in their respective functions. *See KSR*, 550 U.S. at 415–16. To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* at 417. Indeed, we credit Dr. Horenstein’s testimony that replacing the aluminum core wire in He for the power cord in Korodi would have been a merger of familiar elements

according to their established functions, known methods, and predictable results. Ex. 1008 ¶ 103.

Accordingly, based on the record before us, we are persuaded the combination of He and Korodi is a proper combination.

b. Conclusion

Based on the record before us, we are persuaded by Petitioner that the teachings of He and Korodi are properly combined and that the combination of He and Korodi teaches or suggests the limitations recited in claims 1 and 7. Accordingly, based on the current record, Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claims 1 and 7 would have been obvious over the combination of He and Korodi.

B. Other Asserted Grounds of Unpatentability

Petitioner also reasserts the following grounds of unpatentability based on 35 U.S.C. § 103:

Claims	Basis	References
1 and 7	§ 103	He and Currie

With regard to the asserted ground of unpatentability of claims 1 and 7 for obviousness over He and Currie, Petitioner does not explain adequately the relative strengths or weaknesses of this ground and the grounds on which we have instituted. *See Cisco Systems, Inc. v. Constellation Tech. LLC*, Case IPR2014-01180, slip op. at 29–30 (PTAB Feb. 8, 2015) (Paper 8). The Currie reference has a filing date of September 24, 2004 and an issuance date of October 17, 2006. Thus, the Currie reference would not be prior art

if Patent Owner were successful in establishing a conception date “at least as early as April 2004” and diligence from conception to reduction to practice. *See* Prelim. Resp. 11. Accordingly, the arguments presented in Petitioner’s Request for Rehearing do not apply to the combination of He and Currie.

Therefore, we conclude that we did not abuse our discretion in declining to institute an *inter partes* review based the combination of He and Currie. Accordingly, we do not institute an *inter partes* review based on this ground.

III. CONCLUSION

For the foregoing reasons, on rehearing, based on our review of the record before us, we determine Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that the challenged claims are unpatentable based on the combination of He and Korodi. Therefore, we modify our Decision to institute an *inter partes* review of claims 1 and 7 for obviousness over He and Korodi. We determine, however, that we did not abuse our discretion in declining to institute review on the asserted ground based on He and Currie, and rehearing is denied as to that ground. At this stage in the proceeding, we have not made a final determination with respect to the patentability of the challenged claims, including the claim construction.

IV. ORDER

Upon consideration of the Request for Rehearing and the Opposition to the Request for Rehearing, and for the reasons given above, it is

ORDERED that the Request for Rehearing is granted as to the asserted ground of unpatentability based on He and Korodi;

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FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a), the Decision is modified to institute an *inter partes* review of claims 1 and 7 under 35 U.S.C. § 103 based on obviousness over He and Korodi;

FURTHER ORDERED that the Request for Rehearing is otherwise denied.

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