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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THORSTEN SCHRANK, MICHAEL KURRAT, and
ERNST-DIETER WILKENING

Appeal 2018-007877
Application 15/230,628
Technology Center 2800

Before JOSEPH L. DIXON, KEVIN F. TURNER, and
JOHN A. EVANS, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–12. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The claims are directed to a switching system and circuit breaker having a quenching chamber with a porous quenching material therein. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A switching system, comprising
 - a first contact;
 - a second contact moveable in relation to said first contact in an opening direction;
 - a quenching chamber having a quenching element formed of a porous material; and
 - a drive element for driving an arc into said quenching chamber such that the arc expands in said quenching element.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

| | | |
|-----------------|--------------------|---------------|
| Pitha | US 3,698,920 | Oct. 17, 1972 |
| Yamagata et al. | US 4,575,598 | Mar. 11, 1986 |
| Lehmann et al. | US 5,717,183 | Feb. 10, 1998 |
| Herbst | US 7,198,209 B2 | Apr. 3, 2007 |
| Kralik | US 7,417,520 B2 | Aug. 26, 2008 |
| Kralik et al. | US 2013/0292359 A1 | Nov. 7, 2013 |

¹ We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies that Ellenberger & Poensgen GmbH is the real party in interest. (App. Br. 1).

REJECTIONS

The Examiner made the following rejections:

Claims 1, 3, 4, 6–9, and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kralik in view of Yamagata.

Claim 2 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kralik and Yamagata in view of Herbst.

Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kralik and Yamagata in view of Lehmann.

Claim 10 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kralik and Yamagata in view of Pitha.

Claim 11 stands rejected under 35 U.S.C. § 103 as being unpatentable over Kralik and Yamagata in view of Kralik et al.

ANALYSIS

With respect to independent claims 1 and 12, Appellant argues the claims together. (App. Br. 3). We select independent claim 1 as the representative claim for the group and will address Appellant's arguments thereto. See 37 CFR 41.37 (c)(1)(iv) (2017).

The allocation of burdens requires that the USPTO produce the factual basis for its rejection of an application under 35 U.S.C. §§ 102 and 103. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA 1967)). The one who bears the initial burden of presenting a prima facie case of unpatentability is the Examiner. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). A prima facie case is established when the party with the burden of proof points to evidence that is sufficient, if uncontroverted, to entitle it to prevail as a matter of law. *See*

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Saab Cars USA, Inc. v. U. S., 434 F.3d 1359, 1369 (Fed. Cir. 2006). In particular, regarding the Patent Examiner's burden of production:

[A]ll that is required of the office to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of [35 U.S.C.] § 132. As the statute itself instructs, the examiner must “notify the applicant,” “stating the reasons for such rejection,” “together with such information and references as may be useful in judging the propriety of continuing prosecution of his application.” 35 U.S.C. § 132.

In re Jung, 637 F.3d 1356, 1363 (Fed. Cir. 2011).

Here, the Examiner set forth a prima facie case of obviousness setting forth the factual basis and a motivation for the combination based upon the Kralik and Yamagata references in the rejection of the “switch” of independent claim 1. (Final Act. 2–3; Ans. 2–6).

Appellant notes how the Examiner applied the prior art in the rejection and Appellant contends that in the Yamagata reference the arc is not driven into the porous material. (App. Br. 4–5). Appellant further contends that the porous material element taught in Yamagata fulfills another function, and it is not a simple substitution. (App. Br. 6). Appellant further argues that the Yamagata reference “teaches to avoid injecting the arc into the porous material but rather to place the porous material at a position to advantageously absorb irradiated light energy”, and the Yamagata reference teaches away from driving the current into the quenching chamber. (App. Br. 6–7, emphasis omitted). Appellant generally contends that the Examiner's combination is based upon hindsight reconstruction because the evidence adduced by the Examiner is insufficient. (App. Br. 7–9).

The Examiner specifically responds to each of Appellant's general contentions. (Ans. 2–6).

First, the Examiner identifies the rejection is based upon the combination and has detailed what elements are relied upon by each of the prior art references and that the porous materials are “well known materials exhibiting excellent arc and heat resistances, and therefore logically would be resistant to evaporation or deterioration by the arc.” (Ans. 2–3). We agree with the Examiner's line of reasoning and find that Appellant did not file a Reply Brief to further respond to the Examiner's clarifications. Therefore, Appellant's argument does not show error in the Examiner's factual findings or conclusion of obviousness.

Second, the Examiner maintains that the Yamagata reference “teaches that the arc voltage rises as the distance between the contacts increases [col. 2, lines 12-16] which is an inherent characteristic of arc voltages increasing, so that arc currents approach the current zero point.” (Ans. 3). The Examiner concludes that it is reasonable to expect that, contrary to driving down the arm voltage, the circuit breaker would exhibit the behavior noted above, prior to being absorbed. (Ans. 3). We agree with the Examiner's line of reasoning and find that Appellant did not file a Reply Brief to further respond to the Examiner's clarifications. Therefore, Appellant's argument does not show error in the Examiner's factual findings or conclusion of obviousness.

Third, the Examiner notes that with regards to the “simple substitution” that Yamagata's porous material is a reasonable teaching to incorporate the feature in the quenching chamber of Kralik, and that Appellant provides no technical reasoning to confirm such allegations. (Ans. 3–4). We agree with the Examiner's line of reasoning and find that

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Appellant did not file a Reply Brief to further respond to the Examiner's clarifications or to supply additional technical reasoning to support their allegation. Therefore, Appellant's argument does not show error in the Examiner's factual findings or conclusion of obviousness.

Additionally, the Examiner maintains that if the porous material element is known to absorb the energies of light and heat, then it is only logical that its presence in an arcing chamber when an arc is generated between the contacts on separation will produce a certain amount of light, heat and ionized gas within the arc chamber. (Ans. 4). Furthermore, the Examiner finds that Yamagata reference clearly discloses such "a porous material that absorbs the light and heat energy, therefore lowering the temperature of the gas space and lowering the pressure of the ionized gas, thus reducing deterioration of the insulation of the circuit breaker [col. 4, lines 15-25], desired by Kralik." (Ans. 4-5).

Forth, the Examiner disagrees with Appellant's "teaches away" argument because "Yamagata's structure does inherently disclose injecting (absorbing) an arc (light and heat) into the porous material, and therefore logically would not damage (or evaporate) the porous material, for the reasons explained above." (Ans. 5). Additionally, we note that the Examiner relied upon the Kralik reference for teaching the quenching chamber having a quenching element [formed of a porous material;] and a drive element for driving an arc into said quenching chamber [such that the arc expands in said quenching element]. (Final Act. 3).

Appellant has not established that the Yamagata reference teaches away from the claimed invention and have not demonstrated that "a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction

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divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed Cir. 1994). We agree with the Examiner that one of ordinary skill in the art would have found the disputed limitations obvious in light of Kralik and Yamagata’s combined teachings. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“Where the prior art contains ‘apparently conflicting’ teachings ... each reference must be considered ‘for its power to suggest solutions to an artisan of ordinary skill . . . consider[ing] the degree to which one reference might accurately discredit another.’”) citing *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991).

We further agree with the Examiner because nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *see In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“one cannot show nonobviousness by attacking references individually where, as here, the rejections are based on combinations of references” (citations omitted)). Additionally, “the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007). Furthermore, the artisan is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984).

Moreover, Appellant has not demonstrated that the Examiner’s proffered combination of references would have been “uniquely challenging or difficult for one of ordinary skill in the art.” *See Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418). Nor has Appellant provided objective evidence of secondary

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considerations which our reviewing court guides "operates as a beneficial check on hindsight." *Cheese Sys., Inc. v. Tetra Pak Cheese and Powder Sys.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

Finally, in response to Appellant's hindsight argument, the Examiner provides a more detailed response regarding the combination of the teachings. (Ans. 5–6). We additionally note that independent claim 1 merely recites four elements in the "switching system" which the Examiner found to be taught by the Kralik reference. (Ans. 5). The proffered distinction is in the difference in the quenching element, in the quenching chamber, and how the unclaimed operation and material perform an operation with an arc; but the claim does not sufficiently detail these unclaimed features in the claimed "switch." Consequently, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a simple substitution of one material for the other material in the quenching chamber. Additionally, we note that all materials may perform differently under different operating conditions based upon voltage, current, and resistance of the materials which would have been readily apparent to those skilled in the art. Because none of the details thereof regarding the quenching element are recited in the language of independent claim 1, we find Appellant's argument unpersuasive.

Additionally, Appellant did not file a Reply Brief to further respond to the Examiner's clarifications and further details to the combination, and Appellant did not file any additional evidence to support the arguments regarding teaching away and hindsight. As a result, Appellant's arguments do not show error in the Examiner's factual findings or conclusion of obviousness of representative independent claim 1.

Because Appellant did not set forth separate arguments for patentability of independent claim 12 and dependent claims 2–11, we group these claims as falling with representative independent claim 1. 37 CFR 41.37 (c)(1)(iv).

CONCLUSION

The Examiner did not err in rejecting claims 1–12 based upon obviousness.

DECISION

For the above reasons, we sustain the Examiner’s obviousness rejections of claims 1–12).

DECISION SUMMARY

| Claims Rejected | 35 U.S.C. § | Basis | Affirmed | Reversed |
|------------------------|--------------------|---------------------------------|------------------|-----------------|
| 1, 3, 4, 6–9, 12 | 103 | Kralik, Yamagata | 1, 3, 4, 6–9, 12 | |
| 2 | 103 | Kralik, Yamagata, Herbst | 2 | |
| 5 | 103 | Kralik, Yamagata, Lehmann | 5 | |
| 10 | 103 | Kralik, Yamagata, Pitha | 10 | |
| 11 | 103 | Kralik, Yamagata, Kralik et al. | 11 | |
| Overall outcome | | | 1–12 | |

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED