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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/626,257	06/19/2017	Krista WOODS	A233804	3876
23373	7590	06/19/2020	EXAMINER	
SUGHRUE MION, PLLC 2000 PENNSYLVANIA AVENUE, N.W. SUITE 900 WASHINGTON, DC 20006			SPAMER, DONALD R	
			ART UNIT	PAPER NUMBER
			1799	
			NOTIFICATION DATE	DELIVERY MODE
			06/19/2020	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KRISTA WOODS and CHRISTOPHER WOODS

Appeal 2019-005121
Application 15/626,257
Technology Center 1700

Before JAMES C. HOUSEL, N. WHITNEY WILSON, and
MONTÉ T. SQUIRE, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* SQUIRE.

Opinion Dissenting filed by *Administrative Patent Judge* WILSON.

SQUIRE, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–13, which are all of the claims pending in this

¹ This Decision refers to the Specification filed June 19, 2017 (“Spec.”); Final Office Action dated Oct. 11, 2018 (“Final Act.”); Appeal Brief filed Jan. 11, 2019 (“Appeal Br.”); Examiner’s Answer dated Apr. 17, 2019 (“Ans.”); and Reply Brief filed June 17, 2019 (“Reply Brief”).

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Krista Woods, Christopher Woods, and Glovestix, Inc. as the real parties in interest. Appeal Br. 2.

application. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was held on May 21, 2020.³

We AFFIRM, but designate our affirmance as a NEW GROUNDS OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

CLAIMED SUBJECT MATTER

The invention relates to the field of deodorizers for athletic gloves and other athletic equipment as well as non-athletic gloves and shoes. Spec. ¶ 1. According to Appellant's disclosure, the invention comprises an outer housing, which includes removable and replaceable deodorizers, such as silica to absorb moisture and ventilation holes, and is infused with silver ions or other antimicrobial treatments to kill odor causing bacteria. *Id.* ¶¶ 4, 5; Abstract.

Claim 1 illustrates the subject matter on appeal and is reproduced below from the Claims Appendix to the Appeal Brief:

1. A device for insertion within sports equipment comprising:

an outer housing having ventilation holes, ***said outer housing being comprised of plastic that is infused with antimicrobial ions;***

a removable insert displaced within said outer housing, ***said insert including a moisture absorbing deodorizer.***

Appeal Br. 17 (key disputed claim language italicized and bolded).

³ A written transcript of the oral hearing will be entered into the record when the transcript is made available.

REFERENCES

The Examiner relies on the following prior art references as evidence in rejecting the claims on appeal:

Name	Reference	Date
Brush	US 2,446,904	Aug. 10, 1948
Hance	US 4,401,770	Aug. 30, 1983
Phillips, Jr. et al. (“Phillips”)	US 4,742,580	May 10, 1988
Khoury et al. (“Khoury”)	US 5,291,669	Mar. 8, 1994
Qualkinbush et al. (“Qualkinbush”)	US 6,378,224 B1	Apr. 30, 2002
Green et al. (“Green”)	US 2002/0127402 A1	Sept. 12, 2002
Feldhahn et al. (“Feldhahn”)	US 2008/0032119 A1	Feb. 7, 2008
Mirowski	US 2013/0230431 A1	Sept. 5, 2013

SilicaGelPackets.com, *Scented Silica Gel*,
<https://web.archive.org/web/20111112213328/http://silicagelpackets.com/aroma-dri-scented-silica-gel-desiccant-fragrance/> (last visited Apr. 14, 2017) (“Scented Silica Gel”).

Wikipedia, *Parachute Cord*,
https://en.wikipedia.org/w/index.php?title=Parachute_cord&oldid=570725260 (last visited Apr. 14, 2017) (“Parachute Cord”).

Wikipedia, *Silica Gel*,
https://en.wikipedia.org/w/index.php?title=Silica_gel&oldid=564985732 (last visited Apr. 14, 2017) (“Silica Gel”).

REJECTIONS

I. The Examiner rejects claims 1–11 provisionally on the ground of nonstatutory double patenting as being unpatentable over claims 1–10 of co-pending Application No. 14/856,616 (Final Act. 7–8).

II. The Examiner rejects claims 1–13 under 35 U.S.C. § 103 as follows: claims 1–3, 7, and 11–13 as being unpatentable over Brush in view

of Hance, Feldhahn, and Qualkinbush; claim 4 as being unpatentable over Brush, Hance, Feldhahn, Qualkinbush and further in view of Khoury; claim 5 as being unpatentable over Brush, Hance, Feldhahn, Qualkinbush, and Khoury and further in view of Phillips; claim 6 as being unpatentable over Brush, Hance, Feldhahn, Qualkinbush, and Khoury and further in view of Parachute Cord; claims 8 and 9 as being unpatentable over Brush, Hance, Feldhahn, and Qualkinbush and further in view of Silica Gel and Scented Silica Gel; and claim 10 as being unpatentable over Brush, Hance, Feldhahn, and Qualkinbush and further in view of Mirowski and Scented Silica Gel (Final Act. 13–18).⁴

III. The Examiner rejects claims 1–11 under 35 U.S.C. § 103 as follows: claims 1–3, 7, and 11 as being unpatentable over Qualkinbush in view of Green; claim 4 as being unpatentable over Qualkinbush and Green and further in view Khoury; claim 5 as being unpatentable over Qualkinbush, Green, and Khoury and further in view of Phillips; claim 6 as being unpatentable over Qualkinbush, Green, and Khoury and further in view of Parachute Cord; claims 8 and 9 as being unpatentable over Qualkinbush and Green and further in view of Silica Gel and Scented Silica Gel; claim 10 as being unpatentable over the combination of Qualkinbush and Green and further in view of Mirowski and Scented Silica Gel (Final Act. 8–13).⁵

⁴ In this Decision, we refer to this group of rejections, collectively, as the “Examiner’s § 103 rejections of claims 1–13 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others.”

⁵ We refer to this group of rejections, collectively, as the “Examiner’s § 103 rejections of claims 1–11 as obvious over the combinations based on Qualkinbush, Green, and others.”

OPINION

Having considered the respective positions the Examiner and Appellant advance in light of this appeal record, based on the fact-finding and reasons the Examiner provides in the Answer and Final Office Action, and for the reasons set forth below, we affirm the Examiner's provisional rejection of claims 1–11 for nonstatutory double patenting and the Examiner's § 103 rejections of claims 1–13 as unpatentable over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others. We, however, designate our affirmance of the § 103 rejections of claims 1–13 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others as NEW GROUNDS OF REJECTION pursuant to 37 C.F.R. § 41.50(b) because our analysis differs from the Examiner's with regard to certain findings of fact and reasoning.

Because we determine claims 1–13, which constitute all of the claims pending in this Appeal, to be appropriately rejected under § 103 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others, we exercise our discretion and decline to reach the merits of the Examiner's remaining § 103 rejections of claims 1–11 as obvious over the combinations based on Qualkinbush, Green, and others.

I. Provisional Rejection for Nonstatutory Double Patenting

Appellant does not present any substantive argument in response to the Examiner's provisional rejection of claims 1–11 on the ground of nonstatutory double patenting as being unpatentable over claims 1–10 of co-pending Application No. 14/856,616 (Final Act. 7–8). *See* Appeal Br. 6

(admitting the provisional nonstatutory double patenting rejection “is not addressed in this appeal”).

Accordingly, because the Examiner’s rejection of claims 1–11 for nonstatutory double patenting has not been withdrawn (*see* Ans. 3, 5; Final Act. 7–8) and is not addressed by Appellant, we summarily affirm this rejection. *Cf. Hyatt v. Dudas*, 551 F.3d 1307, 1314 (Fed. Cir. 2008); *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (“If an appellant fails to present arguments on a particular issue — or, more broadly, on a particular rejection — the Board will not, as a general matter, unilaterally review those uncontested aspects of the rejection”) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011)).

II. § 103 Rejections of Claims 1–13 as Obvious over the Combinations Based on Brush, Hance, Feldhahn, Qualkinbush, and Others

In response to the Examiner’s § 103 rejections of claims 1–13 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others (Final Act. 13–18), Appellant presents argument for the patentability of independent claim 1 and separate arguments for the patentability of dependent claim 2 and dependent claims 7–10 as a group. Appeal Br. 14, 15. We select independent claim 1, dependent claim 2, and dependent claim 10, respectively, as representative and dispositive of the Examiner’s § 103 rejections over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others. 37 C.F.R. § 41.37(c)(1)(iv). We address these claims each in turn below.

A. Independent Claim 1

The Examiner determines that the combination of Brush, Hance, Feldhahn, and Qualkinbush suggests a device satisfying the limitations of

claim 1 and concludes the combination would have rendered the claim obvious. Final Act. 13–14. The Examiner finds that Brush teaches the majority of the limitations of claim 1. *Id.* at 13–14. The Examiner finds that Brush teaches a device for insertion into sports equipment (shoes) comprising: (a) an outer housing (bar member 10) having ventilation holes and being comprised of plastic; and (b) a removable insert (cartridge 15) displaced within the outer housing and including a moisture absorbing material (desiccant). *Id.* at 13; *See* Brush, Figs. 1, 2, 4, 1:35–48, 2:4–18, 2:27–35.

Regarding the “plastic that is infused with antimicrobial ions” recitation of claim 1, the Examiner relies principally on Hance and Feldhahn for suggesting that limitation. Final Act. 13. In particular, the Examiner finds Hance teaches the need for shoes having antimicrobial properties and Feldhahn teaches providing antimicrobial properties to plastic articles, including, for example, an injection-molded ABS plastic part infused with antimicrobial ions. *Id.* at 13 (citing Hance, Abstract; Feldhahn, Abstract, ¶¶ 20, 32). Regarding the “insert including a moisture absorbing deodorizer” recitation of the claim, the Examiner finds that, although Brush teaches a removable insert (cartridge 15) including a moisture absorbing desiccant, Brush does not specify that the desiccant is a “deodorizer,” as claimed. *Id.* at 13. The Examiner, however, relies on Qualkinbush for teaching that element of the claim. *Id.* at 13–14. In particular, the Examiner finds Qualkinbush teaches using silica as a moisture absorbing desiccant material for deodorizing shoes. *Id.* at 13–14 (citing Qualkinbush, Abstract, Fig. 4, 4:18–59).

Based on the above findings, the Examiner determines it would have been obvious to one of ordinary skill in the art at the time of the invention to have used an antimicrobial ion infused ABS plastic for Brush's outer housing in order to impart antimicrobial properties to a plastic component intended to be inserted into a shoe. Final Act. 13. The Examiner also determines it would have been obvious to one of ordinary skill in the art at the time of the invention to have used silica as the desiccant material included in Brush's insert because silica was a known moisture absorbing material for deodorizing shoes. *Id.* at 14.

Appellant argues the Examiner's rejection of claim 1 should be reversed because the cited art does not teach or suggest the "outer housing being comprised of plastic that is infused with antimicrobial ions" and "including a moisture absorbing deodorizer," as required by the claim. Appeal Br. 6 (arguing "***nothing in this record suggests putting a deodorizing insert into a plastic outer shell, wherein the plastic outer shell is also infused with antimicrobial ions,*** as required by independent claim 1."). In particular, Appellant contends Feldhahn "contains no suggestion related to reducing odors in shoes, gloves, or sports equipment" and "contains no discussion of infusing plastic with antimicrobial ions as recited in claim 1." *Id.* at 14. Appellant further contends Hance does not teach or suggest any addition of silver or other antimicrobial ions to a plastic housing. *Id.* at 14. Rather, Appellant contends

Hance teaches away from the purported combination, by teaching that adding chemicals to the insoles fixes the problem by reducing fungus and bacteria. One of skill would have made a chemically soaked insole if he/she read Hance, not the claimed invention.

Id. at 14.

We do not find Appellant’s arguments persuasive of reversible error in the Examiner’s rejection in view of the fact-finding and reasons the Examiner provides at pages 8–9 of the Answer and pages 13–14 of the Final Office Action, and as further explained below, which a preponderance of the evidence supports.

Appellant’s contentions that Feldhahn does not suggest reducing odors in shoes and infusing plastic with antimicrobial ions (Appeal Br. 14) and Hance does not teach or suggest adding silver or other antimicrobial ions to a plastic housing (*id.* at 14) are not persuasive because they are premised on what Appellant contends the Feldhahn and Hance references teach individually, and not the combined teachings of the cited prior art references as a whole, and what the combined teachings of the references would have suggested to one of ordinary skill in the art. One cannot show nonobviousness by attacking references individually where the rejection is based on a combination of references. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). The Examiner does not rely solely upon Feldhahn and Hance to suggest the “outer housing being comprised of plastic that is infused with antimicrobial ions” and “including a moisture absorbing deodorizer” limitations of the claim.

Rather, as the Examiner finds (Final Act. 13–14) and previously discussed above, it is the combined teachings of the cited art that the Examiner relies upon for suggesting those limitations of the claim. In particular, as the Examiner finds (Final Act. 13), Brush teaches a device for insertion into shoes having an outer housing (bar member 10) comprised of plastic and including a moisture absorbing desiccant material. Brush, 1:35–48, 2:27–28 (“The desiccant may then absorb the moisture from the

shoe.”). Brush also teaches that bar member 10 includes body-member 7, which is in contact with the inner surface of the shoe and attached to bar member 10 to form Brush’s outer housing. *See* Brush, Fig. 4, 1:39–40 (disclosing “bar member **10** is pivotally attached to the end **9**” of body-member 7), 1:35–37 (describing “body-member 7 having substantially its entire surface covered with perforations **8**”). As the Examiner further finds (Final Act. 13–14), Qualkinbush teaches using moisture absorbing desiccant material 40 for deodorizing shoes. Qualkinbush, Abstract, 3:58–61, 4:51–53 (disclosing “the desiccant material **40** may be selected from any commercially available odor and moisture absorbing granular product”).

As the Examiner also finds (Final Act. 13), Hance suggests the need for shoes having antimicrobial properties comprising a plastic material (Hance, Abstract (describing “[a]n improved shoe insole having antibacterial and antifungal properties comprising a flexible polyurethane”)) and Feldhahn teaches providing antimicrobial properties to plastic articles, including an injection-molded ABS plastic part infused with antimicrobial ions (Feldhahn, Abstract, ¶¶ 20, 32, 35–38).

The Examiner also provides a reasonable basis to evince why one of ordinary skill would have combined the teachings of cited art to arrive at the claimed invention. Final Act. 13–14 (explaining it would have been obvious to one of ordinary skill in the art to have used an antimicrobial ion infused ABS plastic for Brush’s outer housing in order to impart antimicrobial properties to a plastic component intended to be inserted into a shoe and to have used silica as the desiccant material included in Brush’s insert because silica was a known moisture absorbing material for deodorizing shoes). *See*

also KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 416 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”).

Appellant’s disagreement as to the Examiner’s factual findings and reasons for combining the references, without more, is insufficient to establish reversible error. *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (“[M]ere statements of disagreement . . . as to the existence of factual disputes do not amount to a developed argument.”); *see also KSR*, 550 U.S. at 420 (explaining that any need or problem known in the art can provide a reason for combining the elements in the manner claimed).

Appellant’s argument that Hance teaches away from combining the prior art to arrive at the claimed invention (Appeal Br. 14) is not persuasive because it is conclusory and Appellant does not direct us to sufficient evidence in the record or provide a persuasive technical explanation to support it. *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984); *see also In re Fulton*, 391 F.3d 1195, 1201 (finding that there is no teaching away where the prior art’s disclosure “does not criticize, discredit, or otherwise discourage the solution claimed”). We will not read into the references a teaching away where no such language exists. *Cf. DyStar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1364 (Fed. Cir. 2006).

Appellant further argues the Examiner’s rejection should be reversed because Feldhahn is not directed to and does not address the problem faced by the applicant. Appeal Br. 14; *see also* Reply Br. 12 (“Feldhahn is not directed to odor-reduction in sports equipment, but rather deals with medical equipment decontamination for hospital and medical facilities.”). Instead,

Appellant contends the Examiner's rejection uses hindsight from Appellant's disclosure to convert the hazards of medical environment decontamination to a foot odor or sports equipment odor problem. Reply Br. 11.

We do not find these arguments persuasive of reversible error in the Examiner's rejection because Appellant construes too narrowly the scope of Feldhahn's disclosure, especially as it pertains to the particular problem with which the applicant was involved. Contrary to what Appellant argues, Feldhahn does address a problem faced by the applicant because, like the claimed invention, which involves providing antimicrobial properties to plastic articles, including plastic parts infused with silver ions or other antimicrobial treatments (*see* Spec. ¶¶ 5, 29), Feldhahn also involves providing antimicrobial properties to plastic articles, including, for example, an injection-molded ABS plastic part infused with antimicrobial ions (*see* Feldhahn, Abstract, ¶¶ 20, 36). *Cf. In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) ("A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.").

We do not find Appellant's contention that the Examiner's rejection uses hindsight (Reply Br. 11) persuasive because it is conclusory and unsupported by persuasive evidence in the record. *De Blauwe*, 736 F.2d at 705. Moreover, we find the Examiner's rejection is based on explicit disclosures in each of the cited references, as further explained above, and what those disclosures considered as a whole reasonably would have suggested to one of ordinary skill in the art, rather than based on impermissible hindsight reconstruction as Appellant argues. *See In re*

McLaughlin, 443 F.2d 1392, 1395 (CCPA 1971) (acknowledging that “[a]ny judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning” but such reconstruction is proper “so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure”).

Appellant also argues the Examiner’s rejection should be reversed based on evidence of secondary considerations of nonobviousness, which Appellant contends the Examiner improperly ignores. Appeal Br. 6, 15–16 (arguing “evidence of secondary considerations of nonobviousness further supports the conclusion that the claimed invention was not obvious based on the combinations of prior art references cited in the Final Office Action”). In particular, Appellant cites and relies upon the Declaration Under 37 C.F.R. § 1.132 of Krista Woods (“Woods Declaration”), which Appellant contends provides evidence of long felt need, failure of others, commercial success, unexpected results, and industry praise. *See* Appeal Br. 8–11, 19 (Evidence Appendix).

Any initial obviousness determination is reconsidered anew in view of the proffered evidence of nonobviousness. *See In re Rinehart*, 531 F.2d 1048, 1052 (CCPA 1976); *In re Eli Lilly & Co.*, 902 F.2d 943, 945 (Fed. Cir. 1990). The ultimate determination of whether a claimed invention would have been obvious or nonobvious is a legal conclusion, which is made based on considering and weighing all of the facts in evidence. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Based on our review of the Woods Declaration and the fact-finding and reasons the Examiner provides at page 9 of the Answer and pages 2–5 of

the Final Action, we agree with the Examiner that Appellant’s proffered evidence of nonobviousness does not outweigh the evidence in favor of obviousness. *See Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1371 (Fed. Cir. 2011) (“A strong case of prima facie obviousness . . . cannot be overcome by a far weaker showing of objective indicia of nonobviousness.”). We address Appellant’s proffered evidence of secondary considerations of nonobviousness below.

1. Long Felt Need and Failure of Others

Appellant cites and relies principally upon paragraphs 7a and 7c of the Woods Declaration as evidence of long felt need and failure of others. Appeal Br. 9–10. Appellant contends that the statements relied upon “recognize[] not only that there was a long felt need, but that the need was unsolved until the instant invention.” *Id.* at 10. Appellant further contends the prior art the Examiner cites in the rejection also evidences a long felt need and failure by others. *Id.* at 10 (arguing “attempts to deodorize and dry out shoes and other sports equipment via an insert, extend as far back as at least 1948” and the “cited art shows attempt after attempt at improving upon the basic concept of either inserting a deodorizer, or moisture absorber, or both, into a shoe”).

We accord Appellant’s evidence of long felt need and failure by others little weight because, as the Examiner finds (Final Act. 2–3), the statements do not adequately establish a need recognized by those having ordinary skill in the art that had existed for a long time and had not been satisfied by another before Appellant’s claimed invention. The statements at paragraphs 7a and 7c of the Woods Declaration fail to provide sufficient information to support a showing of long felt need and failure by others. For

example, although Mr. Falcone states that the product “*fixes a long time issue*” (Woods Decl. ¶ 7a), Mr. Falcone does not specify what exactly that long time issue is and how long the issued has been recognized, nor identify any failed attempts to address the issue. Similarly, although Ms. Simpson states GloveStix is “*the BEST invention ever*” (Woods Decl. ¶ 7c), there is no indication that the product satisfies any long felt need and no identification of any failed attempts by others to address such need.

2. Commercial Success

Appellant cites and relies upon paragraphs 7–11 of the Woods Declaration as evidence of commercial success. Appeal Br. 9–10. We accord Appellant’s evidence of commercial success little weight because, as the Examiner finds (Final Act. 3–4), the evidence does not adequately show that the alleged commercial success is derived from the claimed invention. That is, Appellants has not sufficiently demonstrated a nexus between the alleged commercial success and the claimed invention. Merely showing that there was commercial success of a product that embodies the invention, without more, is not sufficient.

Although the Woods Declaration includes some evidence of awards and press coverage recognizing the inventors for entrepreneurial skill, it is unclear from the evidence, and Appellant does not adequately explain, how the claimed features are tied to the alleged commercial success. For example, Appellant does not quantify what portion of the GloveStix product’s sales are attributable to the claimed features.

3. Unexpected Results

Appellant cites and relies upon paragraphs 8–11 of the Woods Declaration as evidence of unexpected results. Appeal Br. 9–10. We accord

Appellant's evidence of unexpected results little weight because, as the Examiner finds (Final Act. 4), Appellant has failed to establish what results associated with the claimed invention are, in fact, unexpected. *See In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972) (explaining the burden rests with Appellant to establish, among other things, that the alleged unexpected results associated with the claimed invention are, in fact, unexpected). For example, as the Examiner finds and explains (Final Act. 4), because bacteria is a known source of odor, it would not have been unexpected to one of ordinary skill in the art that the combination of an antimicrobial and silica desiccant in modified-Brush's device would predictably result in increased deodorizing over silica alone. As the Examiner further finds (Final Act. 4), Appellant does not provide evidence comparing the claimed invention with the closest prior art. *Klosak*, 455 F.2d at 1080.

4. Industry Praise

Appellant cites and relies upon paragraph 7 of the Woods Declaration as evidence of industry praise. Appeal Br. 9. Although we accord Appellant's evidence of industry praise some weight, we agree with the Examiner (Final Act. 4–5) that it is unclear from at least some of the evidence what portion of the industry praise is attributable to the features of Appellant's claimed invention. As with commercial success, evidence of industry praise is only relevant when it is directed to the merits of the invention claimed. *See Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1311 (Fed. Cir. 2006).

In sum, having considered the totality of the evidence, including Appellant's evidence of secondary considerations of nonobviousness, we

determine a preponderance of the evidence favors the Examiner's conclusion of obviousness as to claim 1.

We, therefore, sustain the Examiner's rejection of claim 1.

B. Dependent Claim 2

Appellant presents additional argument for the patentability of dependent claim 2. Appeal Br. 15. Claim 2 depends from claim 1 and further recites "wherein said ions include silver ions." Appeal Br. 17 (Claims Appendix.)

Appellant argues the Examiner's rejection of claim 2 should be reversed because Hance does not contain any discussion or suggestion of silver ions. Appeal Br. 15. We do not find this argument persuasive because the Examiner does not rely solely upon Hance for teaching that element of the claim. *Keller*, 642 F.2d at 425. Rather, as the Examiner finds and explains (Ans. 9), the Examiner relies on Feldhahn for disclosing that element. *See* Feldhahn ¶¶ 32, 36, 39.

We, therefore, sustain the Examiner's rejection of claim 2.

C. Dependent Claims 7–10

Appellant presents additional argument for the patentability of dependent claims 7–10 as a group. Appeal Br. 15. We select claim 10 as representative of this group and claims 7–9 stand or fall with claim 10. 37 C.F.R. § 41.37(c)(1)(iv).

Claim 10 depends from claim 7 and further recites "wherein said removable insert includes approximately 7.5g scented silica gel and approximately 7.5g activated carbon." Appeal Br. 18 (Claims Appendix.)

The Examiner determines that the combination of Brush, Hance, Feldhahn, Qualkinbush, Mirowski, and Scented Silica Gel suggests a device

satisfying the limitations of claim 10 and concludes the combination would have rendered the claim obvious. Final Act. 17–18.

Appellant argues the Examiner’s rejection of claim 10 should be reversed because the Examiner

cites no reference for the specific amounts of either scented silica gel or activated carbon, but then concludes that one of ordinary skill would have optimized the amounts to achieve the claimed requirement.

Appeal Br. 15. Rather, Appellant contends the Examiner improperly relies “on *per se* rules instead of the legally-required analysis and evidence.” *Id.* at 15; *see also* Reply Br. 13 (arguing the “Examiner’s reasoning is certainly a legally impermissible *per se* obvious approach because it shortcuts the requisite fact-based analysis with purported *per se* rules”).

We do not find Appellant’s arguments persuasive of reversible error in the Examiner’s rejection in view of the fact-finding and the reasons the Examiner provides at pages 8–9 of the Answer and pages 17–18 of the Final Office Action, which a preponderance of the evidence supports. As the Examiner finds (Final Act. 17), Qualkinbush teaches the use of silica gel as a moisture absorbing desiccant material for deodorizing shoes. Qualkinbush 4:43–47, 4:51–53. Qualkinbush also teaches activated charcoal being added to the desiccant material to increase the effectiveness of the device. *Id.* at 4:55–57.

As the Examiner further finds (Final Act. 17–18), Mirowski teaches a moisture and malodor control formulation for shoes and gloves that includes scented material (essential oils) as well as activated carbon. Mirowski, Abstract, ¶¶ 56–58. Mirowski further teaches “the malodor control component may comprise 1 g-3 g of activated carbon if light malodor adsorption is desired, and 6 g-15 g [of] activated carbon for heavy malodor

adsorption.” *Id.* ¶ 63. In other words, the amount of activated carbon is a result-effective variable. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012) (“A recognition in the prior art that a property is affected by the variable is sufficient to find the variable result-effective.”).

As the Examiner also finds (Final Act. 17), Scented Silica Gel teaches the use of a scented silica gel desiccant having certain fragrances for eliminating odors was known (Scented Silica Gel 1), which suggests the degree of odor (i.e., the level of malodor control) is affected by the amount of fragrance in the scented silica gel. Scented Silica Gel further teaches the scented silica gel being available for use in an amount of, for example, 50 g. *Id.* at 2.

Thus, we are persuaded the Examiner correctly determines (Final Act. 18) that it would have been obvious to one of ordinary skill in the art to have arrived at the claimed amounts of scented silica gel and activated carbon in modified Brush’s device through routine experimentation by optimizing the amount of scented silica gel and activated carbon in order to achieve the desired amounts of moisture control, malodor control, and fragrance. *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) (“[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.”); *see also In re Boesch*, 617 F.2d 272, 276 (CCPA 1980) (“[D]iscovery of an optimum value of a result effective variable . . . is ordinarily within the skill of the art.”).

We, therefore, sustain the Examiner’s rejection of claim 10.

Accordingly, we affirm the Examiner’s rejections of claims 1–13 under 35 U.S.C. § 103 as obvious over the combinations based on Brush,

Hance, Feldhahn, Qualkinbush, and others. Because our analysis differs from the Examiner's with regard to certain findings of fact and reasoning, we designate our affirmance of the § 103 rejections of claims 1–13 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others as NEW GROUNDS OF REJECTION pursuant to 37 C.F.R. § 41.50(b).

*III. § 103 Rejections of Claims 1–11 over the Combinations
Based on Qualkinbush, Green, and Others*

The Examiner rejects claims 1–11 under 35 U.S.C. § 103 as obvious over the combinations based on Qualkinbush, Green, and others. Final Act. 8–13. Because, as discussed above, we determine claims 1–13, which constitute all of the claims pending in this Appeal, to be appropriately rejected under § 103 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others cited by the Examiner, we exercise our discretion and decline to reach the merits of the Examiner's remaining § 103 rejections of claims 1–11 as obvious over the combinations based on Qualkinbush, Green, and others.

CONCLUSION

In summary:

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–11		nonstatutory double patenting	1–11	
1–3, 7, 11–13	103	Brush, Hance, Feldhahn, Qualkinbush	1–3, 7, 11–13	
4	103	Brush, Hance, Feldhahn,	4	

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
		Qualkinbush, Khoury		
5	103	Brush, Hance, Feldhahn, Qualkinbush, Khoury, Phillips	5	
6	103	Brush, Hance, Feldhahn, Qualkinbush, Khoury, Parachute Cord	6	
8, 9	103	Brush, Hance, Feldhahn, Qualkinbush, Silica Gel, Scented Silica Gel	8, 9	
10	103	Brush, Hance, Feldhahn, Qualkinbush, Mirowski, Scented Silica Gel	10	
Overall Outcome			1–13	

The Examiner’s decision to reject claims 1–13 is AFFIRMED, and we designate our affirmance of the § 103 rejections of claims 1–13 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others as NEW GROUNDS OF REJECTION pursuant to 37 C.F.R. § 41.50(b).

This Decision contains NEW GROUNDS OF REJECTION pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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; 37 C.F.R. § 41.50(b)

WILSON, *Administrative Patent Judge*, DISSENTING.

I respectfully dissent from the decision by the majority of this panel to affirm the rejection of claims 1–13 under 35 U.S.C. § 103 as obvious over the combinations based on Brush, Hance, Feldhahn, Qualkinbush, and others. While I agree with the majority that the Examiner has set forth a prima facie case of obviousness, I believe the preponderance of the evidence of record, including the evidence submitted in support of the secondary considerations of nonobviousness, does not support the rejection. Accordingly, I would reverse the obviousness rejection and dissent from the majority’s affirmance.

As stated above, I agree with the majority insofar as the evidence of record without consideration of the secondary considerations would support affirmance of the rejection.

However, as set forth in the majority opinion, the initial (i.e., prima facie) obviousness determination is reconsidered in view of the proffered objective evidence of nonobviousness. *Rinehart*, 531 F.2d at 1052; *Eli Lilly*, 902 F.2d at 945. The ultimate conclusion as to whether the claimed invention would have been obvious is based on all of the facts in evidence, including the objective indicia of nonobviousness. *Oetiker*, 977 F.2d at 1445.

The Federal Circuit has described the significance of the so-called secondary considerations or objective indicia of nonobviousness:

The Supreme Court explained that various factors “may also serve to ‘guard against slipping into use of hindsight,’ and to resist the temptation to read into the prior art the teachings of the invention in issue.” These factors are commonly known as secondary considerations or objective indicia of

non-obviousness. These include: commercial success enjoyed by devices practicing the patented invention, industry praise for the patented invention, copying by others, and the existence of a long-felt but unsatisfied need for the invention. As this court held in *Stratoflex*:

Indeed, evidence of **secondary considerations** may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not. It is to be considered as part of all the evidence, . . . not just when the decisionmaker remains in doubt after reviewing the art.

Apple Inc. v. Samsung Elecs. Co., 839 F.3d 1034 (Fed. Cir. 2016) (internal citations omitted).

The Board recently issued a precedential decision pertaining to the analytical framework for consideration of objective indicia of nonobviousness in the obviousness analysis. *Lectrosonics, Inc. v. Zaxcom, Inc.*, Case IPR2018-01129, Paper 33 (Jan. 24, 2020). For objective indicia of nonobviousness to be accorded substantial weight, there must be a nexus — established in this case by Appellant — between the evidence and the merits of the claimed invention. *Lectrosonics*, p. 32 (citing *ClassCo, Inc., v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016)). The evidence must be reasonably commensurate with the scope of the claims. *Id.* (citing *Rambus Inc. v. Rea*, 731 F.3d 1248, 1257 (Fed. Cir. 2013)). There is a presumption that there is a nexus between the evidence and the merits of the claimed invention when the patentee shows that the asserted objective evidence is tied to a specific product and that product embodies and is coextensive with the claimed features, *Id.* (citing *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d

1366, 1373 (Fed. Cir. 2019)). “[T]he degree of correspondence between a product and the patent claim falls along a spectrum. At one end of the spectrum lies perfect or near perfect correspondence. At the other end lies no or very little correspondence.” *Fox Factory*, 944 F.3d at 1374.

In this instance, Appellant has provided evidence, in the form a Declaration, that its commercial products GloveStix and ShoeStix “contain every element of claim 1” (Woods Decl. ¶ 4; *see also* Woods Decl. ¶¶ 5, 6). The evidence cited by the Declaration supports Appellant’s contention that the commercial products GloveStix and ShoeStix embody the features of claim 1. In particular, the image and description of the Glovestix product⁶, show the claimed outer housing with ventilation holes, which is made of an “antimicrobial plastic,” which is further described as “antimicrobial-protected plastic” which is “infused with Silver Seal™ Technology.”⁷ The Glovestix website also indicates that Glovestix includes “replaceable insert bags [which] absorb moisture and deodorize” which corresponds to the claimed “removable insert displaced within said outer housing, said insert including a moisture absorbing deodorizer.”

The only elements of the commercial product as depicted on the website which are not recited in claim 1 are the handle and the removable

⁶ Woods Decl., ¶ 6; Glovestix.com website (<https://glovestix.com/>, last accessed on 6/15/20).

⁷ Glovestix.com website (<https://glovestix.com/pages/what-is-it> (last accessed on 6/15/20)). The website states: “To further inhibit odor-causing bacteria growth and destroy odors, SilverSeal™ technology infuses the plastic used in our StinkStix with silver ions. Silver and certain other metals have natural antimicrobial properties.”

clip, which are recited in claims 4 and 5, respectively.⁸ The Examiner does not dispute any of the foregoing facts (*see* Ans. 5–7). Therefore, in my judgment, Appellant has demonstrated that the commercial product both embodies and is coextensive with the claims.

I now address the specific evidence cited by Appellant as demonstrating that secondary considerations of nonobviousness are sufficient to conclude that the claims would not have been obvious over the prior art.

Long-felt need and failure of others. As explained in the majority decision, the evidence relied on by Appellant to demonstrate that the claimed invention satisfies a long-felt need and the failure of others is found primarily in paragraph 7 of the Woods Declaration (Appeal Br. 9–10). In particular, Appellant provides a quote from a product analyst for Lacrosse Playground, in which the analyst states “After a few weeks of using [Glovestix], I don’t even smell my gloves. Fantastic product that fixes a long time issue” (Woods Decl. ¶ 7(a)) and also cites a quote from a customer: “We LOVE our GloveStix. This is the best invention ever. No stink equals one happy momma!” (Woods Decl. ¶ 7(c)). Appellant also cites a number of other testimonials describing the effectiveness of the commercial product embodying the claims (Woods Decl. ¶ 7).

In my judgment, the testimonials, in combination with other patents cited by the Examiner in the rejections (in particular Brush, Hance, Khoury, Qualkinbush) show that the issue of controlling odor in shoes and athletic equipment has been a longstanding one. Brush, for example, is a patent

⁸ The website also describes the handle as being made of “paracord,” which is recited in claim 6.

from 1948 which addresses the issue of “reducing the moisture in [a] shoe and inhibiting the formation of odors in the shoe” (Brush, 1:3–5), and Qualkinbush is a 2002 patent relating to an apparatus for removing odor and moisture from footwear (Qualkinbush, Abstract). Thus, there have been repeated attempts over decades to address this problem. Nevertheless, the Woods Declaration shows a professional in the area of lacrosse gear (Mr. Falcone) describing the commercial embodiment of the claimed invention as “fix[ing] a long time issue.”

I disagree with my colleagues that Mr. Falcone doesn’t adequately explain what the “long time issue” resolved by the invention is. His quote explicitly states that “after a few weeks of using [GloveStix] I don’t even smell my gloves” (Woods Decl. ¶ 7). Moreover, his statement that the product “fixes a long time issue” necessarily, in my view, means that previous attempts to address the smell issue were failures (i.e. not successful).

Commercial Success and Industry Praise. The majority concludes that the evidence submitted by Appellant of the commercial success of the invention should be given little weight because of Appellant’s failure to show a nexus between the commercial success and the claimed invention. In my view, as outlined above, Appellant has sufficiently shown that the GloveStix and ShoeStix products embody and are coextensive with the claims. Thus, the evidence of the commercial success of these products, which is set forth in detail in Paragraphs 9 and 10 of the Woods Declaration, is fairly attributed, in my view, to the claimed invention. Although, as conceded by the Declarant, some of the evidence is put forth is directed more towards the business or entrepreneurial aspects of Appellant than the

invention per se, there is no doubt, in my judgment, that at least some of the commercial success of the invention is due to the product itself, which embodies the claimed invention.

The evidence of industry praise is directed to the commercial embodiments of the claimed invention. For example, professional lacrosse goalie and US National Team player Chris C. stated “Thank you GloveStix for your help throughout Worlds. Your product provided 2 dry pair of goalie gloves each day” (Woods Decl. ¶ 7(f)). Similarly, professional lacrosse goalie stated that “GloveStix work great in neutralizing the smell. Makes a huge difference”, and a lacrosse magazine review called the commercial embodiment a fantastic product that “fixes a long time issue” (Woods Decl. ¶¶ 7(b) and 7(a)). As discussed above, the commercial embodiments embody and are coextensive with the claimed invention, so that praise for the commercial embodiment is praise for the claimed invention.

In view of the foregoing evidence, in my judgment the preponderance of the evidence of record, including the evidence of secondary considerations set forth in the Woods Declaration, does not support the determination of obviousness in view of the prior art. Although the prima facie case of obviousness as set forth by the Examiner would be enough, in the absence of further evidence, to sustain the rejection, when all of the evidence is considered, the obviousness rejections should be reversed.

Accordingly, I respectfully dissent from decision to affirm the obviousness rejections of claims 1–13 under § 103, although I concur in the summary affirmance of the nonstatutory double patenting rejection.