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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* BOBBY HU

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Appeal 2018-000843  
Application 13/678,641  
Technology Center 3700

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Before KEVIN F. TURNER, DANIEL S. SONG, and  
FREDERICK C. LANEY, *Administrative Patent Judges*.

SONG, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 6–11 and 13–15.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as the inventor. Br. 1.

<sup>2</sup> Amendment After Final amending independent claim 11 to incorporate limitations of previously rejected claims 2–4 was entered, and claims 2–4 have been canceled. Ans. 2; Adv. Act. 2.

### CLAIMED SUBJECT MATTER

The claims are directed to a socket assembly. Independent claim 11, reproduced below, is illustrative of the claimed subject matter:

11. A socket assembly comprising:

a body including a driving portion and a transmission portion, with the transmission portion including a first end and a second end spaced from the first end along a longitudinal axis, with the first end of the transmission portion connected to the driving portion, with the driving portion adapted to be driven by a driving tool, with the transmission portion adapted to drive a fastener, with the body made of a first metal, and with the first end of the transmission portion having a first color;

a sleeve mounted to the second end of the transmission portion, with the sleeve including an outer periphery, with the transmission portion having an outer periphery extending from the driving portion to the sleeve, with the outer peripheries of the sleeve and the transmission portion positioned adjacent to and aligned with one another, with the sleeve made of a second metal different from the first metal, with the outer periphery of the sleeve coated with a coating of material formed on the sleeve, with the outer periphery of the sleeve having a second color different than the first color; and

a jacket made of a transparent material or light-transmittable color material and mounted around the transmission portion and the outer periphery of the sleeve, with the jacket including first and second ends spaced from each other along the longitudinal axis, with the jacket further including an outer periphery extending between the first and second ends of the jacket, with the jacket further including an inner periphery extending between the first and second ends of the jacket and surrounded by the outer periphery of the jacket, with the jacket having a longitudinal length at least greater than a longitudinal length of the sleeve, wherein the inner periphery at the first end of the jacket surrounds and abuts the outer periphery of the transmission portion of the body, wherein the inner periphery at the second end of the jacket surrounds and

abuts the outer periphery of the sleeve, with the jacket including a lip extending inward from the second end of the jacket in a radial direction perpendicular to the longitudinal axis, with the lip abutting the end face of the sleeve facing away from the driving portion of the body, with the first color of the transmission portion of the body and the second color of the outer periphery of the sleeve visible through the outer and inner peripheries of the jacket.

Br. 11–12 (Claims App'x).

### REJECTIONS

The Examiner rejects various claims under 35 U.S.C. § 103(a) as follows:

1. Claims 11 and 15 as unpatentable over Wallden (US 7,117,765 B1, issued Oct. 10, 2006) in view of Huang (US 7,836,801 B2, issued Nov. 23, 2010), Arnold (US 5,819,606, issued Oct. 13, 1998), Neijndorff (US 6,138,538, issued Oct. 31, 2000), and Wallace (US 2003/0192409 A1, pub. Oct. 16, 2003). Final Act. 2; Ans. 2.

2. Claims 6, 7, 9–11, 13, and 14<sup>3</sup> as unpatentable over Tsai (US 2011/0100167 A1, pub. May 5, 2011) in view of Wallace and Neijndorff. Final Act. 4.

3. Claim 8 as unpatentable over Tsai in view of Wallace, Neijndorff and Carey (US 5,009,133, issued Apr. 23, 1991). Final Act. 7.

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<sup>3</sup> As noted, Amendment After Final amending independent claim 11 to incorporate limitations of claims 2–4 has been entered, and claims 2–4 canceled. Ans. 2; Br. 10 (Claims App'x).

OPINION

The Appellant argues claims 6–11 and 13–15 together as a group.<sup>4</sup> Br. 3. Therefore, we select independent claim 11 as representative. Only those arguments actually made by Appellant have been considered in this decision, and any other arguments that could have been made are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv); *see also In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011); *Ex Parte Frye*, 94 USPQ2d 1072, 1075–76 (BPAI 2010) (precedential).

*Rejection Based on Wallden*

The Examiner rejects independent claim 11, finding that Wallden discloses a socket assembly substantially as claimed. Final Act. 2–3. The Examiner finds that “Wallden fails to disclose the material of the socket or sleeve, a coating on the sleeve [and] a jacket mounted around the body and sleeve.” Final Act. 3. The Examiner takes official notice that “nearly all tool sockets [are] formed from metal, most commonly from steel.” Final Act. 3. The Examiner also finds that both Huang and Arnold disclose “colored sleeves for application to a tool for easily identifying size and/or other characteristics” and that the sleeves may be made of anodized aluminum “to provide the desired color . . . in order to provide durable, relatively inexpensive sleeves available in a wide range of colors.” Final Act. 3.

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<sup>4</sup> We note that although Rejection 1 is based on Wallden whereas Rejections 2 and 3 are based on Tsai, the Appellant argues these rejections together. For clarity, we separately address Rejections 2 and 3 based on Tsai.

Based on these findings, the Examiner concludes that it would have been obvious to a person of ordinary skill in the art to have “form[ed] the sleeves of Wallden from aluminum (a second metal that different from the first commonly known steel used for sockets) and to use anodizing to provide a durable colored outer coating on the aluminum sleeve as is well known in the art.” Final Act. 3.

The Examiner further finds that “Neijndorff discloses a polymeric jacket for applying to cover metal surfaces of driving tools and sockets to prevent marring or scratching of surfaces to which a fastener is being driven by the socket,” and that the polymeric jacket may be made of, *inter alia*, polycarbonate, which is known to be transparent and/or translucent. Final Act. 3–4. The Examiner also finds that Neijndorff discloses the recited relative dimensional and structural characteristics of the jacket. Ans. 4–5.<sup>5</sup>

The Examiner concludes that it would have been obvious to a person of ordinary skill in the art to have provided a jacket for the sockets of Wallden, and because the socket of Wallden have colored indicia, “to form the jacket of transparent and/or translucent material,” in order to “allow the user to observe the indicia” and maintain visibility thereof. Final Act. 4; Ans. 5; Ans. 12 (“it would clearly be obvious to select from one of the known transparent/translucent materials or at least provide the material in a transparent/translucent form to allow a user to view the colored socket portions, or else [it would] destroy[] the intended function . . . if a user were unable to view the colored portions.”).

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<sup>5</sup> We cite to the Answer instead of the Final Office Action considering the fact that independent claim 11 was amended in the entered Amendment After Final.

We agree with the Examiner's findings and conclusions, and address the Appellant's arguments below.

The Appellant initially asserts that the Background of the Invention section of the Specification establishes a long-felt but unmet need for “a **long, impact socket** having a length larger than 75 mm, for use with pneumatic tools, and especially adapted for using on aluminum alloy wheels having deep screw holes.” Br. 3; *see also* Br. 8. The referenced portion of the Specification states that aluminum alloy wheels are liable to scratch when conventional sockets are used thereon, and that bolts for aluminum alloy wheels “are smaller than regular bolt sizes.” Spec. 1, ll. 5–8, 11–13.

However, establishing long-felt need requires objective evidence showing existence of a persistent problem recognized by those of ordinary skill in the art for which a solution was not known. *In re Gershon*, 372 F.2d 535, 538–39 (CCPA 1967). Hence, the Appellant must present affidavits or other factual evidence of “a failure of others to provide a feasible solution to [a] long-standing problem” and evidence “that experts did not foresee” the solution claimed. *See In re Piasecki*, 745 F.2d 1468, 1475 (Fed. Cir. 1984). Finally, the invention must satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491, 496 (CCPA 1971).

In the present appeal, we are not presented with objective evidence that establishes existence of a persistent problem recognized by those of ordinary skill in the art, failure of others to provide a solution, how such unmet need was met by the invention claimed, or other evidence that supports finding of long-felt need. In that regard, as evident from the prior art relied upon, deep sockets were well-known and it cannot be reasonably disputed that such sockets sized for wheel lugs were not known.

The Appeal Brief includes an image of a document entitled “Super Impact” appearing to show deep sockets, with annotations “impact socket for pneumatic tools,” and “length larger than 75 mm.” Br. 4. However, the Appellant does not identify where the document is in evidence, explain what the document is, explain its pertinence to the claimed invention, or present arguments based thereon as to the present appeal generally or to establish long-felt need in particular.

The Appellant also provides a short discussion of each of the references relied upon by the Examiner, and argues that the references do not “relate to or solve problems relating to aluminum alloy wheels.” Br. 4–5. The Appellant also points out alleged deficiencies as to various references in disclosing the claimed invention, or suggesting combining features of these references together. Br. 4–5. For example, the Appellant states that “Wal[l]den does not relate to or solve problems relating to aluminum alloy wheels and does not disclose or suggest forming the sleeve of a metal different than that of the body and does not disclose or suggest a jacket.” Br. 4.

To any extent that these statements of the Appellant are arguments, they are unpersuasive. The Appellant does not persuasively set forth any reasons as to why the prior art relied upon are either not within the same field of endeavor of sockets, or reasonably pertinent to the problem with which the inventor is involved. *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). In addition, non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

The Appellant argues that the rejection is focused on “the differences of the present invention from the prior art and not on the invention as a whole,” and that “none of the prior art disclose or suggest that the parts disclosed in the respective patents could be rearranged as well as utilized in a different socket type in a manner as recited in the claims and/or disclose or suggest a reason or motivation to do so.” Br. 5. In support, the Appellant cites to various case law for the proposition that the prior art needs to provide a suggestion, teaching or motivation for the suggested modification. Br. 6. The Appellant also sets forth a series of questions as to why a person of ordinary skill would have modified Wallden in the manner suggested by the Examiner when the references do not disclose or suggest doing so.

Br. 7. For example, the Appellant questions

what would motivate a person skilled in the art to attempt to disregard the express teachings of Wallden to form its sleeve of metal instead of a vinyl tape, powder coat, ionized or colored snap ring to achieve a function which is not accomplished or suggested as desirable in Wallden and/or to add a jacket to achieve a function which is not accomplished or suggested as desirable in Wallden?

Br. 7.

These arguments are unpersuasive. The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). There is nothing improper about the Examiner considering the differences between claim 11 and the prior art.

As to the Appellant's argument based on lack of suggestion, teaching or motivation for the suggested modification within the prior art, the Supreme Court has rejected the rigid requirement of a teaching, suggestion or motivation to combine known elements in order to establish obviousness. *See KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 418–19 (2007). What is required is an articulated reason with a rational basis to support the obviousness conclusion. *See KSR*, 550 U.S. at 417–18. In the present case, the Examiner has provided reasons with rational underpinnings as summarized above as to why it would have been obvious to one of ordinary skill to have modified the sockets of Wallden in view of the applied prior art references. In contrast, the Appellant does not address the articulated reasoning provided by the Examiner with evidence or persuasive arguments.

The Appellant also argues that “[t]he Examiner failed to support what the level of skill is.” Br. 7. However, this argument is unpersuasive because the cited prior art can be considered as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown.’”); *Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567, 1573 (Fed. Cir. 1984).

The Appellant further argues that “Neijndorff does not disclose or suggest that the preferred plastic materials are ‘transparent and/or translucent,’” and that “it has not been shown that materials listed in Neijndorff forming the jacket ‘are known to be transparent and/or translucent.’” Br. 8. According to the Appellant, “even assuming that some of the materials could be available as being transparent and/or translucent,”

because these materials are disclosed in Neijndorff for the purpose of “improved wear and higher strength,” there is “no motivation or reason that exists in Neijndorff to use ‘transparent and/or translucent’ material.” Br. 8.

This argument is unpersuasive because it again presumes that a reason must be provided in the prior art reference to combine the art, and fails to address the rationale actually provided by the Examiner as to why it would have been obvious to one of ordinary skill to provide a transparent or translucent jacket. As to the polycarbonate material disclosed in Neijndorff, it cannot be reasonably disputed that polycarbonate is transparent and that this fact is well established.<sup>6</sup> *See also* Ans. 11–12.

Therefore, for the reasons discussed above, the Appellant has not persuaded us of any error in the Examiner’s rejection of independent claim 11 based on Wallden, and we affirm the same. The Appellant does not submit any arguments as to dependent claim 15 also subject to this rejection. Thus, claim 15 falls with claim 11.

#### *Rejections Based on Tsai*

The Examiner also rejects independent claim 11 based on Tsai, finding that Tsai discloses a socket assembly substantially as claimed, including a differently colored sleeve, but finds that Tsai fails to disclose “how the sleeve is colored” and a jacket. Final Act. 4–5. The Examiner takes official notice that “metal materials that are colored are typically either

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<sup>6</sup> “Polycarbonate : any of various tough transparent thermoplastics characterized by high impact strength and high softening temperature.” MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/polycarbonate> (last visited Nov. 15, 2019).

painted or coated with some form of electrochemical process, which will provide the desired color as well as protect the metal from corrosion.” Final Act. 5. The Examiner further finds that Wallace and Neijndorff “both disclose polymeric jackets for applying to cover metal surfaces of driving tools and sockets to prevent marring or scratching of surfaces to which a fastener is being driven by the socket,” and that Neijndorff further discloses making the jacket out of polycarbonate, which is known to be transparent. Final Act. 5.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art to have provided a jacket for the sockets of Tsai “to prevent marring or scratching of surfaces during use, as taught by Wallace and Neijndorff, wherein it would obviously be further desirable to form the jacket of transparent and/or translucent material” such as polycarbonate disclosed in Neijndorff “to allow the user to observe the indicia provided on the sleeve of Tsai.” Final Act. 5–6. The Examiner also finds that Wallace discloses the recited lip and the length of the jacket. Ans. 7.

As noted above, although Rejections 2 and 3 are based on Tsai, the Appellant argues these rejections together with Rejection 1, which is based on Wallden. Thus, the arguments of the Appellant addressed above relative to Rejection 1 are applicable to the rejections based on Tsai, these arguments being unpersuasive for the reasons discussed above. As to Tsai specifically, the Appellant only makes arguments similar to those made with respect to Wallden, questioning “what would motivate a person skilled in the art to attempt to add a jacket to achieve a function which is not accomplished or suggested as desirable in Tsai?” Br. 7. Again, the Appellant does not

address the reasoning set forth by the Examiner in the rejections based on Tsai.

Therefore, we affirm the Examiner's rejection of independent claim 11 based on the combination of Tsai, Wallace, and Neijndorff. Dependent claims 6, 7, 9, 10, 13, and 14 also rejected in Rejection 2 fall with claim 11. In addition, the Appellant does not submit any arguments directed to claim 8. Thus, Rejection 3 of claim 8 is also affirmed.

### CONCLUSION

The Examiner's rejections are affirmed.

### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
11, 15	103(a)	Wallden, Huang, Arnold, Neijndorff, Wallace	11, 15	
6, 7, 9–11, 13, 14	103(a)	Tsai, Wallace, Neijndorff	6, 7, 9–11, 13, 14	
8	103(a)	Tsai, Wallace, Neijndorff and Carey	8	
<b>Overall Outcome</b>			6–11, 13–15	

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TIME PERIOD FOR RESPONSE

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

AFFIRMED