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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANOVA HEARING LABS, INC.,
Patent Owner and Appellant

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2
Technology Center 3900

Before JOHN A. JEFFERY, STEPHEN C. SIU, and
DENISE M. POTHIER, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION ON APPEAL

This proceeding is a supplemental examination of U.S. Patent No. 8,477,978 B2 (“the ’978 patent”) to James F. Caldarola, entitled *Open Fit Canal Hearing Device*, issued July 2, 2013. An oral hearing was conducted on July 11, 2018.

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

Patent Owner appeals under 35 U.S.C. § 134 and 306 from the Examiner's rejection of claims 1–6, 9, 10, 12–39, 41–47, 49–58, and 63–70. App. Br. 11, 14, 15, 30, 31.¹ We have jurisdiction under 35 U.S.C. § 6(b).

The disclosed invention relates generally to hearing devices. *See* Spec 2:38.

Claim 1 reads as follows:

1. A completely in the canal hearing device, said device comprising:

a case having a power source, a microphone, a receiver element, and an acoustic passageway, wherein said case, when mounted in the ear canal, provides at least one open passageway between the ear canal and the case;

at least one flexible insert comprising a hub portion and an outer portion adjacent to the hub portion, the hub portion attached to a tip formed at a receiver end of the case, the outer portion providing an open area when mounted against a wearer's ear canal to create a sound path extending through the at least one open passageway and said open area, wherein the open area defined by the outer portion ranges from about 5 to 70% when the flexible insert is in its mounted position within the ear canal.

Patent Owner appeals the Examiner's rejections of claims 1–6, 9, 10, 12–36, 38, 39, 41–47, 52–58, and 63–67² under 35 U.S.C. § 103 as

¹ Appeal Brief, filed August 7, 2017 (“App. Br.”).

² The Examiner withdraws the rejection of claims 7, 8, and 11 under 35 U.S.C. § 103 as unpatentable over Brown, Admitted Prior Art, Bauman '086, Bauman '076, and Sauer. Ans. 14, 34.

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

unpatentable over Brown,³ Admitted Prior Art,⁴ Bauman '086,⁵ Bauman '076,⁶ and Sauer;⁷ claims 15, 16, 36, 37, 49, and 50 under 35 U.S.C. § 103 as unpatentable over Brown, Admitted Prior Art, Bauman '086, Bauman '076, Sauer, and Saxton,⁸ and claims 17, 51, and 68–70 under 35 U.S.C. § 103 as unpatentable over Brown, Bauman '086, Bauman '076, Sauer, and Kuo.⁹

ISSUE

Did the Examiner err in rejecting claims 1–6, 9, 10, 12–39, 41–47, 49–58, and 63–70?

ANALYSIS

Claim 1 recites a case that provides at least one open passageway between the ear canal and the case. The Examiner finds that either one of Brown or Sauer discloses this feature. Final Act. 5. For example, the Examiner explains that Brown discloses a “case” for a hearing aid that is “smaller than the ear canal,” and that Sauer also discloses a “case and

³ US Patent No. 6,129,174, issued October 10, 2000 (“Brown”).

⁴ Including US Patent No. 7,027,608, issued April 11, 2006 (“Fretz”).

⁵ US Patent No. 7,421,086 B2, issued September 2, 2008 (“Bauman '086”).

⁶ US Patent No. 7,076,076 B2, issued July 11, 2006 (“Bauman '076”).

⁷ US Patent No. 5,654,530, issued August 5, 1997 (“Sauer”).

⁸ US Patent Publication 2004/0258263 A1, Published Dec. 23, 2004 (“Saxton”).

⁹ US Patent No. 6,097,823, issued August 1, 2000 (“Kuo”).

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

hearing aid housing” providing an open passageway in “the auditory canal.” Final Act. 5–6 (citing Brown 4:33–47 and Sauer Abstract).

Patent Owner argues that “the open passageway . . . is not present in Brown” because “the external module 72 is shown . . . outside the ear [and] in contact with the ear canal.” App. Br. 16. We are not persuaded by Patent Owner’s argument. As the Examiner explains, Brown discloses a case (e.g., an “intra-canal receiver module” – Brown 4:35–36) for a hearing aid and a space separating the external surface of the intra-canal receiver module with the wall of the ear canal. *See, e.g.*, Brown Fig. 9 (disclosing a space that separates the wall of the intra-canal receiver module and the wall of the ear canal – i.e., the receiver module of Brown being “smaller than the ear canal,” as the Examiner explains). Patent Owner does not assert or demonstrate persuasively a substantive difference between the aforementioned space disclosed by Brown and the “open passageway,” as recited in claim 1. In both cases, the “open passageway” is a space between the external surface of the “case” and the wall of the ear canal.

As described above, the Examiner finds that Sauer also discloses the claimed “open passageway.” Patent Owner argues that the Examiner’s “reliance on Sauer is a ‘red herring’ [because it] is unrelated to the question of the open passageway as it relates to Brown.” App. Br. 17. However, Patent Owner fails to explain sufficiently a difference between the space that separates the external surface of the housing of the hearing aid of Sauer with the wall of the ear canal and the claimed “open passageway.” To the

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

contrary, the space disclosed by Sauer appears to be identical to the claimed “open passageway.”

Claim 1 also recites at least one flexible insert comprising a hub portion and an outer portion that provides an “open area” to create a sound path extending through the “open passageway” and the “open area.” The Examiner finds that Brown discloses these features. Final Act. 5–6. Specifically, the Examiner explains that Brown discloses a “flexible insert (coupler) (Figs. 2–5 generally) comprising a hub portion (34) and an outer portion (cap 36) adjacent to the hub portion” that is “attached to a tip formed at a receiver end of the case (46),” “providing an open area (venting system) when mounted against a wearer’s ear,” and creating “a sound path . . . to allow dissipation of acoustic energy responsible for occlusion effects.” Final Act. 5–6 (citing Brown 4:61–65, Figs. 2–5, claim 6).

Patent Owner argues that “[t]he Examiner admits that Brown does not teach the open area limitation” and that “Brown is silent as to open area.” App. Br. 14, 21. Patent Owner is mistaken. As described above, the Examiner explains that Brown, in fact, discloses the “open area.” For example, the Examiner finds that Brown discloses “an outer portion (cap 36)” and “an open area (venting system).” Final Act. 5–6 (citing Brown 4:65–65, Figs. 2–5, claim 6). As the Examiner describes, Brown discloses a flexible insert with an “inner portion” (i.e., “snap ring 34” – Brown 1:51, Figs. 2, 5) and an “outer portion (cap 36)” (Brown 6:5, Figs. 2, 5) that forms an open area (the “venting system” – i.e., system including “sound apertures

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

44” within the “outer portion (cap 36)” that “allows the sound . . . to pass through . . . to the ear canal” – Brown 6:6–11). Patent Owner does not allege or demonstrate persuasively a substantive difference between the “open area (venting system)” of Brown and the “open area,” as recited in claim 1. We are not persuaded by Patent Owner’s argument.

Patent Owner also argues that “[t]he Examiner also admits that the outer portion with the open area of claim 1 is not taught in Brown.” App. Br. 14. Patent Owner is mistaken. As described above, the Examiner explains that Brown, in fact, discloses the “outer portion,” as recited in claim 1. We are not persuaded by Patent Owner’s argument.

Patent Owner argues that “[t]here is no sound path . . . in Brown.” App. Br. 17. Claim 1 recites a sound path extending through the at least one open passageway and said open area. As discussed, Brown discloses “sound apertures 44” that “allows the sound . . . to pass through . . . to the ear canal” and that “sound apertures 44 provide a pathway for . . . diffusion of . . . accumulated acoustical energy, as indicated by the arrows 48 [of Fig. 8].” Figure 8 of Brown discloses that sound (i.e., “acoustical energy”) passes through the open passageway (i.e., the space separating the external surface of the receiver module) and the open area (i.e., the system including “sound apertures 44”) Brown 8:24–26, Fig. 8. Hence, sound extends through an open passageway and open area (to create a “sound path”).

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

Claim 1 also recites that the “open area” defined by the outer portion (of the flexible insert) ranges from about 5 to 70%. Claim 1 does not recite a specific region or area of which the “open area” defines “5 to 70%.” In other words, claim 1 does not recite a specific limitation relative to the size of the “open area.” In any event, as previously discussed, the Examiner finds that Brown discloses an “open area (venting system)” that is “sized so as to minimize occlusion” and that it would have been obvious to one of ordinary skill in the art to have determined a desired size of the “open area” “through routine experimentation.” Final Act. 6–7.

Patent Owner argues that “[t]he Examiner doesn’t say how one of skill in the art would get to the 5% limitation,” that “[i]t is error for the Examiner to baldly conclude that the venting by arrows 48 [of Brown] could be modified to be 5% of the acoustical coupling,” and “Brown is silent as to the vent size.” App. Br. 18, 21. As discussed above, claim 1 does not recite a specific limitation relative to the size of the “open area.” To the extent that claim 1 was intended to recite that the open area must range from about 5 to 70% *of an unspecified area so as to minimize occlusion* (we note, however, that claim 1 does not recite this limitation), as the Examiner appears to assume, we agree with the Examiner that it would have been obvious to one of ordinary skill in the art to have determined desired specifications (e.g., to minimize occlusion – see further discussion below) “through routine experimentation.” See *In re Aller*, 220 F.2d 454, 456 (CCPA 1955) (“[I]t is not inventive to discover the optimum or workable ranges by routine

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

experimentation.”); *KSR*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

Given the fact that claim 1 fails to recite an area of which the open area occupies “5 to 70%” (and, therefore, fails to recite a limitation on the dimensions or sizing of the “open area”), we agree with Examiner’s apparent presumption that one of skill in the art would have assumed that the dimensions of the “open area” would have been chosen based on minimizing occlusion, if one of skill in the art would have assumed anything at all regarding the sizing of the “open area.” This is particularly true given the fact that the Specification discloses that the size of the “open area” is selected based on minimizing an “occlusion effect” and that using different percentages of an “open area” and asking users about their experience indicated that with “about 40% open area after being mounted,” “[t]he wearer [of the hearing device] . . . commented that he could hear more naturally not hearing his own voice when he talked” and that “about a 10-60% open area and more preferably 25-50% open area . . . reduc[ed] complaints involving occlusion.” The ’978 patent 6:51–55, 7:19–22. Notably, the Specification discloses that the “percentage” is determined based on minimizing the occlusion effect but does not disclose (and the claims do not recite) a specific area or dimension from which to base the “percentage.” In other words, the Specification also fails to disclose a specific size of the “open area.”

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

Brown also discloses that one of ordinary skill in the art would have understood the need “for control of the so-called occlusion effect” by providing a sound path (of unspecified size) through an open area and Bauman ’086 discloses performing studies comparing multiple groups of users of hearing devices for the management of the “occlusion effect” (using a similar technique as disclosed in the Specification of asking users about their experience). Therefore, one of skill in the art would have understood the need for addressing the known problem of the “occlusion effect” in hearing aids (as disclosed by both Brown and Bauman ’086) and would have further understood a known methodology (studies) for testing hearing devices of varying specifications (e.g., by asking users about their experience) to determine a range of desired specifications (e.g., Bauman ’086). Brown 8:4–5, 19–20.

In addition, the Examiner finds that each of Fretz, Bauman ’076, and Bauman ’086 discloses a flexible insert with an “open area” and that Bauman ’086 further discloses an “open area of the passage way in terms of percentage of the [hearing aid] relative to the diameter of the ear canal, wherein the relative diameter ranges included . . . less than the diameter of the user’s ear canal, less than half the diameter of the user’s ear canal, less than 20% of the diameter of the user’s ear canal.” Final Act. 7–9 (citing Fretz Fig. 27 (a “dome shaped insert . . . [with] multiple vent holes (109) are located in an outer portion of the tip and a bladed fan-shaped tip (Fig. 13) including slots (54)”), Bauman ’076 3:8–22 (a “suspending mechanism

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

[having] four flexible . . . arms . . . [that] provides open areas”); Bauman ’086 1:61–65, 6:11–23, 7:52–8:3, Figs 11–13, 18–20 (a “flexible insert (88) attached to the case and defining an open area” and “minimiz[ing] the . . . occlusion effect”).

Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have combined the teachings of Brown, Bauman ’086, Bauman ’076, and Fretz because such a combination “would destroy the necessary sealing required by Brown.” App. Br. 19. We are not persuaded by Patent Owner at least because, contrary to Patent Owner’s assertion, Brown does not disclose that “sealing” is either “necessary” or “required.” Rather, Patent Owner cites an example disclosed in Brown that the “cap portion 36 conforms to the shape of the ear canal 10, lightly contacting the canal walls and acoustically sealing the ear canal.” App. Br. 19 (citing Brown 9:3–5). Aside from the fact that the cited example of Brown is merely one example that does not disclose that “sealing” is either “necessary” or “required” or otherwise mandatory, as previously noted, Brown explicitly discloses the opposite – i.e., providing “a vent across the hearing aid” including “sound apertures” and “diffusion of . . . accumulated acoustical energy, as indicated by the arrows 48 [of Fig. 8].” Brown 8:19–20, 24–26. Patent Owner does not explain sufficiently how “sealing” is supposedly “required” and/or “necessary” in Brown when Brown explicitly discloses a “vent” for sound that allows sound energy to “diffuse.”

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have “tak[en] a piece of a . . . hearing device [of Fretz, Bauman ’076, or Bauman ’086] and us[ed] it in a . . . hearing device [of Brown].” App. Br. 19. To the extent that Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have bodily incorporated any of the hearing aid inserts of any of Fretz, Bauman ’076, or Bauman ’086 into the hearing aid of Brown, we note that “[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

As the Examiner indicates and as previously discussed, it would have been obvious to one of ordinary skill in the art, being of ordinary creativity and not being an automaton, to have combined a known hearing aid with an “open passageway” and a flexible insert creating a sound path through the open passageway and “open area” formed by the flexible insert (i.e., Brown) with the known feature of flexible inserts of varying dimensions, sizes, or specifications (any of Brown, Fretz, Bauman ’076, or Bauman ’086) in order to address the known problem of the “occlusion effect” in hearing aids (any of Brown, Fretz, Bauman ’076, or Bauman ’086) to achieve the known, predictable, and expected result of a hearing aid with an insert of a desired dimension, size, or specification (any of Brown, Fretz, Bauman ’076, or

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

Bauman '086). Hence, as the Examiner states, the combination of the known components to achieve a predictable, expected result would have resulted in, at best, “an obvious and predictable design choice.” Final Act. 8:1–3. “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416.

Claim 23 recites that the flexible insert is sized to provide a gap not exceeding either 4mm, 2mm, or 1mm. The Examiner finds that “the choice of a particular gap along the length of the case would have been a matter of routine design choice in order to optimize the functionality and comfort of the device.” Final Act. 14. We agree with the Examiner. For example, as previously discussed, Brown discloses providing a “gap” (e.g., providing a space between the external surface of the intra-canal receiver module of the acoustic coupler and the wall of the ear canal – Brown Fig. 9) and, as the Examiner indicates, “it is not inventive to discover the optimum or workable ranges by routine experimentation.” *See Aller*, 220 F.2d at 456; *see also KSR*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”).

Patent Owner argues that Brown fails to disclose the features recited in claim 23 because, according to Patent Owner, “in Brown, the case sits outside the ear canal and there is no concept of sizing the acoustic coupler in Brown to create an opening between the ear canal and the case.” App. Br. 26. We disagree with Patent Owner.

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

To the extent that Patent Owner’s assertion that Brown discloses a “case [that] sits outside the ear canal” is somehow relevant to whether Brown discloses a “gap” as recited in claim 23, we note that, as previously discussed, Brown discloses that the intra-canal receiver module is situated within the ear canal and not “outside the ear canal” as Patent Owner alleges. *See e.g.*, Brown 4:35–38 (“an intra-canal receiver module . . . to be inserted deeply into the ear canal”). Also, as previously discussed, contrary to Patent Owner’s assertion, Brown discloses providing “an opening between the ear canal and the case.” *See e.g.*, Brown Fig. 9 (disclosing a space between the external surface of the intra-canal receiver module of the acoustic coupler and the wall of the ear canal).

Patent Owner argues that determining a range of sizes of the “gap,” as recited in claim 23 would have been more than a mere design choice or would have entailed more than mere “routine experimentation” because, according to Patent Owner, the cited references fail to disclose “a relationship between a gap along the length of the case and a seal . . . of Brown.” App. Br. 27. We are not persuaded by Patent Owner’s argument at least because Patent Owner has not sufficiently established relevance between whether the references disclose a “relationship between a gap . . . and a seal . . . of Brown” and whether the determination of a range of sizes of the “gap” would have been no more than a mere design choice achieved by no more than “routine experimentation” by one of ordinary skill in the art of ordinary creativity and not an automaton. For example, as previously

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

discussed, Brown discloses a receiver module (i.e., a “case”) and a gap that is formed substantially between the entire surface of the case and the ear canal, “a mechanism for control of the so-called occlusion effect,” that “[f]eedback is a particular problem for users of canal devices,” and that “gaps between the earpiece and the wall of the ear canal . . . [are] a significant source of acoustic feedback.” Brown 2:17–19, 27–28, 8:4–5, Fig. 9. Hence, Brown discloses that one of ordinary skill in the art would have understood the known problem of an “occlusion effect” if no gap is present between a case of a hearing aid and the wall of the ear canal and would also have understood the known problem of “feedback” in the presence of “gaps” between the case of a hearing aid and the wall of the ear canal.

Likewise, Bauman ’086 discloses examples of a “receiver unit configured and positioned within a user’s ear canal so as to minimize . . . occlusion effect” and testing of various configurations including a receiver unit with a “maximum overall dimension or diameter . . . that is less than the maximum . . . diameter of the user’s ear canal,” “less than half the maximum lateral dimension or diameter of the user’s ear canal,” “less than twenty percent of the maximum lateral dimension or diameter of the user’s ear canal,” and/or “less than ten percent of the maximum lateral dimension or diameter of the user’s ear canal.” Bauman ’086 1:63–65, 2:12–30, 7:52 – 8:3. Bauman ’086 also discloses that “preventing sounds generated within the ear canal from escaping” results in “feedback reduction.” Bauman ’086 6:24–27. Hence, Bauman ’086 confirms that one of ordinary skill in the art

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

would have understood the problems of the “occlusion effect” and “feedback” and further discloses testing methodologies to determine an optimal range of sizes of a gap between a case of a hearing aid and the wall of the ear canal to address the occlusion effect and feedback.

As previously discussed, Bauman '086 also discloses routine testing methodologies that would have been known to one of skill in the art to determine an optimal size of a gap between a case of the hearing aid and the wall of the ear canal, the gap having been known to one of skill in the art to be sized to reduce the known problems of hearing aids including the occlusion effect and feedback. In other words, as the Examiner explains, determining the general range of sizes, absent any structural differences between the structure of the claimed invention and that disclosed in the prior art is simply routine optimization of the invention suggested by the prior art.

Claim 27 recites “at least one flexible insert” and “at least another flexible insert.” The Examiner explains that “providing inserts of different sizes . . . is standard practice in the art,” “the initial testing of the user’s hearing . . . generally include[s] the user testing the hearing aid with a variety of different inserts of various sizes,” and, in any event, Fretz “points out . . . the differences between the different kinds of tips.” Ans. 35. Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have provided more than one “flexible insert” in a hearing aid kit because there is no “basis for the Examiner to say that . . . the user is provided with different inserts.” Reply Br. 30. We agree with the Examiner

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

that one of ordinary skill in the art having ordinary creativity and not being an automaton would have understood that the hearing aid disclosed by Brown as having “a series of alternate embodiments” (Brown 9:11) with varying structures to have provided various corresponding structures (i.e., more than one insert) in a kit. In any event, “mere duplication of parts has no patentable significance unless a new and unexpected result is produced.” *See In re Harza*, 274 F.2d 669, 671 (CCPA 1960). Patent Owner does not allege or demonstrate persuasively that including an additional insert in a kit would have resulted in a “new and unexpected result” or what that hypothetical result might have been. Nor do we independently determine such a “new and unexpected result.” Patent Owner provides similar arguments in support of claim 38. App. Br. 28. We are not persuaded by Patent Owner’s arguments with respect to claim 38 for similar reasons set forth for claim 27.

Regarding claim 47, Patent Owner argues that “the Examiner provides no reasoning whatsoever as to how the foam element of [Fretz] is to replace the acoustic coupler of Brown” and that, in any event, replacing the acoustic coupler of Brown by bodily incorporating the “foam element” would “defeat[] the entire purpose of Brown’s invention.” Hence, Patent Owner alleges that it would not have been obvious to one of ordinary skill in the art to have combined the teachings of Brown and Fretz because there is allegedly no reason to bodily incorporate the “foam element” of Fretz into the system of Brown and such a bodily incorporation of the foam element

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

into Brown would supposedly “defeat[] the entire purpose of Brown.” App. Br. 29. However, “the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d at 425. Nor does Patent Owner assert or demonstrate persuasively that using a “foam element” would have somehow defeated the purpose of providing a hearing aid that aids hearing (i.e., the “entire purpose” of Brown).

Regarding claim 63, Patent Owner argues combining the teachings of Brown and Bauman '076 would have “destroy[ed] the seal function that Brown seeks as part of Brown’s hearing device.” App. Br. 30. In other words, Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have combined the teachings of Brown and Bauman '076 because doing so would have defeated the intended purpose of Brown, the presumed intended purpose of the hearing aid of Brown allegedly being to maintain a “seal.” We are not persuaded by Patent Owner’s argument at least because Patent Owner does not demonstrate persuasively that the intended purpose of the hearing aid of Brown is to maintain a seal. *See* the above discussion.

Also, one of skill in the art would have understood that the intended purpose of a hearing aid is to aid hearing rather than maintaining a “seal.” Patent Owner fails to demonstrate persuasively that combining teachings of

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

the hearing aid of Bauman '076 or Bauman '086 would have somehow defeated the intended purpose of aiding hearing of Brown, especially given the fact that each of Bauman '076, Bauman '086, and Brown each disclose hearing aids with the same intended purpose of aiding hearing.

Claim 15 recites “additional mounting means” to support the hearing device within the ear canal. Claim 16 recites that the “additional mounting means” comprises “flexible ribs.” Patent Owner argues that the combination of Brown and Saxton fails to disclose “additional mounting means” because, according to Patent Owner, “Brown already forms a seal with the acoustic coupler.” App. Br. 31. We are not persuaded by Patent Owner’s argument because providing additional mounting for a mounted hearing aid (e.g., of Brown) would have been a matter of common sense to one of ordinary skill in the art if the mounted hearing aid needed such additional mounting. This would have been particularly true given the fact that one of ordinary skill in the art would have had ordinary creativity and would have been considered to be more than a mere automaton. *KSR*, 550 U.S. at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). In any event, Patent Owner does not correlate sufficiently the hearing aid of Brown “form[ing] a seal” to whether it would have been obvious to one of ordinary skill in the art to have provided additional mounting in a hearing aid.

Patent Owner also argues that the combination of Brown and Saxton fails to disclose additional mounting that comprises “flexible ribs.” As

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

discussed above, Brown discloses an “insert” with an “outer portion” that comprises flexible ribs. *See e.g.*, Brown 9:5, Fig. 9 (“structural ribs 40” on the “compliant cap portion 36”). Patent Owner does not explain sufficiently a difference between the “ribs” on the “compliant” cap portion (of Brown) and the “flexible ribs,” as recited in clam 16.

Claim 17 recites “active feedback reduction.” The Examiner finds that the combination of Brown and Kuo discloses this feature. *See e.g.*, Final Act. 16; Ans. 13. We agree with the Examiner. As the Examiner indicates, Kuo discloses the known feature of feedback reduction in hearing aids (Kuo Abstract). Also, Brown confirms that the problem of “feedback” in hearing aids was known in the art. *See e.g.*, Brown 2:17–19, 27–28, 8:4–5, Fig. 9 (“[f]eedback is a particular problem for users of canal devices”). It would have been obvious to one of ordinary skill in the art to have combined the known problem of feedback in hearing aids (Brown or Kuo) with the known feature of feedback reduction in hearing aids (Kuo) to achieve the predictable and expected result of feedback reduction in hearing aids (e.g., Kuo). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416.

Patent Owner argues that it would not have been obvious to one of ordinary skill in the art to have combined known feedback reduction in a hearing aid to address the known issue of feedback in hearing aids because, according to Patent Owner, Brown discloses that “there is no need for anti-

Appeal 2018-003841
Reexamination Control 96/000,138
Patent 8,477,978 B2

feedback”. App. Br. 31. We are not persuaded by Patent Owner’s argument at least because the issue before us is whether it would have been obvious to an ordinarily skilled artisan to have combined the teachings of the cited references, and not whether it would have been *needed* to do so. In any event, Patent Owner has not demonstrated persuasively that Brown, in fact, discloses that “there is no need for anti-feedback” in hearing aids. In fact, as previously discussed, Brown explicitly discloses that feedback is a known issue in hearing aids.

Patent Owner does not provide additional arguments in support of the remaining disputed claims.

SUMMARY

We affirm the Examiner’s rejections of claims 1–6, 9, 10, 12–39, 41–47, 49–58, and 63–70.

AFFIRMED