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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID A. BARNETT

Appeal 2019-004704
Application 15/244,779
Technology Center 3700

Before JENNIFER D. BAHR, WILLIAM A. CAPP, and
LISA M. GUIJT, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–20.² We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and enter a NEW GROUND OF REJECTION.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Barnett Outdoors, LLC. Appeal Br. 1.

² The Examiner objects to claims 21–23 as depending from a rejected base claim, but indicates that these claims would be allowable if rewritten in independent form. Final Act. 18.

CLAIMED SUBJECT MATTER

Appellant's invention is directed to a crossbow track assembly having a longitudinal cavity for attaching crossbow accessories. Spec. ¶ 16. Claims 1 and 14 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A crossbow track assembly comprising a crossbow track having a top surface and a side surface, the top surface including an arrow track, the side surface including a longitudinal passage leading to a longitudinal cavity, wherein the side surface forms an upper shoulder and a lower shoulder of the longitudinal cavity, and wherein both the longitudinal passage and the longitudinal cavity extend substantially the entire length of the crossbow track.

EVIDENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Sedlmeier	US 5,927,041	July 27, 1999
Bednar	US 2013/0174825 A1	July 11, 2013
Biafore	US 2013/0213371 A1	Aug. 22, 2013
Park	US 2016/0209158 A1	July 21, 2016

REJECTIONS

Claims 1, 14, 19, and 20 stand rejected under 35 U.S.C. § 103 as unpatentable over Bednar and Biafore.

Claims 2–4 and 15–17 stand rejected under 35 U.S.C. § 103 as unpatentable over Bednar, Biafore, and Sedlmeier.

Claims 5 and 18 stand rejected under 35 U.S.C. § 103 as unpatentable over Bednar, Biafore, Sedlmeier, and Park.

Claims 6–13 stand rejected under 35 U.S.C. § 103 as unpatentable over Bednar, Biafore, and Park.

OPINION

Obviousness Based on Bednar and Biafore

Independent claims 1 and 14 both recite a crossbow track assembly comprising, in pertinent part, a crossbow track having a side surface including a longitudinal passage leading to a longitudinal cavity, wherein both the longitudinal passage and the longitudinal cavity extend substantially the entire length of the crossbow track. Appeal Br. 27, 29 (Claims App.). Claim 14 recites a first side surface and a second side surface, each having such a longitudinal passage and longitudinal cavity extending substantially the entire length of the crossbow track. *Id.* at 29 (Claims App.). As described in Appellant’s Specification and illustrated in Appellant’s drawings, the longitudinal passage extends from the side surface of the crossbow track and is the entrance to the longitudinal passage, much like the mouth of a cave. *See* Spec. ¶ 17; Figs. 2, 4 (crossbow track 24, longitudinal passage 34, and longitudinal cavity 38).

The Examiner finds that Bednar discloses a crossbow track assembly comprising a crossbow track (presumably barrel 12) having a “side surface including a longitudinal passage leading to a longitudinal cavity.” Final Act. 4 (citing Fig. 9, element 14); *see also id.* at 5 (finding that Bednar’s track has two such surfaces each including a longitudinal passage leading to a longitudinal cavity). The Examiner does not specifically identify the particular structures of Bednar corresponding to the “longitudinal passage” and the “longitudinal cavity” distinctly and independently recited in the claims. However, we understand the Examiner’s finding to be that the

mouth of Bednar's barrel slot 14 (i.e., the intersection of the slot with the external side surface of barrel 12) corresponds to the claimed "longitudinal passage" and the remainder of the slot through the thickness of the barrel wall corresponds to the claimed "longitudinal cavity." And to the extent that this is the Examiner's finding, it appears reasonable, considering the claim language in light of Appellant's underlying disclosure.

The Examiner finds that "Bednar may not explicitly teach wherein both the longitudinal passage and the longitudinal cavity extend substantially the entire length of the crossbow track." Final Act. 4, 6. However, in the Answer, the Examiner finds that Bednar "can be considered to have longitudinal passage and cavity which extends substantially the entire length of the crossbow track, under a single reference, *if* the crossbow track were considered to end near the grip portion as shown above the 'Figure 9' text with the vertical line under the broadest reasonable interpretation." Ans. 4 (emphasis added). This position is untenable because it is predicated on an unreasonable interpretation of Bednar's crossbow track as ending significantly short of its full extent. As shown, for example, in Figure 6, the crossbow track, which is the structure having an arrow track included in its top surface as required by claim 1 (i.e., barrel 12), extends well beyond the point where the grip portion starts and well beyond the end of barrel slot 14.

The Examiner states that he "does not view the terminology of 'substantially' the entire length as meaning that such slot must extend to the end of the track but perhaps more than half way." Ans. 6. This construction is unreasonably broad because it is consistent with neither the underlying disclosure of Appellant's invention nor the ordinary and customary meaning of "substantially."

As illustrated, for example, in Figures 4, 7, and 12 of the present application, Appellant's longitudinal passage 34 extends fully from one end of crossbow track 24 to the other end. *See* Spec. ¶ 17 (identifying longitudinal passage 34); *see also* Figs. 1, 14 (depicting what appears to be a short cap (not numbered) on one end of track 24). Thus, in the context of the disclosure in the Specification and drawings, the term "substantially" would have its ordinary, dictionary meaning of "largely but not wholly." *See, e.g., York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572–73, (Fed. Cir. 1996) ("In this case, the patent discloses no novel uses of claim words. Ordinarily, therefore, 'substantially' means 'considerable in . . . extent,' *American Heritage Dictionary Second College Edition* 1213 (2d ed. 1982), or 'largely but not wholly that which is specified.' *Webster's Ninth New Collegiate Dictionary* 1176 (9th ed. 1983).") Thus, we determine that the term "substantially the entire length" permits the claims to encompass a longitudinal passage that extends largely but not wholly the entire length of the crossbow track. In other words, although the claim language permits longitudinal passages and cavities that terminate some small, insubstantial, distance from either or both ends of the crossbow track, this claim language does not encompass a longitudinal passage or cavity terminating a substantial distance from either end.

The Examiner finds that Biafore teaches "wherein both the longitudinal passage and the longitudinal cavity extend substantially the entire length of the crossbow track." Final Act. 4, 6 (citing Biafore, Fig. 8, cable slot 126). However, as shown more clearly in Biafore's Figure 9, which "is a right side view of the barrel of FIG. 8" (Biafore ¶ 50), and

Figure 10, which “is a left side view of the barrel of FIG. 8” (*id.* ¶ 51), cable slot 126 extends only approximately one-third of the length of barrel 104, which corresponds to the claimed crossbow track due to the arrow track on its top surface, in the longitudinal direction. *See, e.g.*, Biafore ¶ 82 (disclosing that “right and left side connecting walls 124, 125 extend from the rearward end 111 of the barrel 104, but do not extend all the way to the forward end 110 of the barrel 104” and “cable slot 126 extends from the forward end 110 to the right and left side connecting walls 124, 125”). Thus, based on a reasonable construction of “substantially the entire length,” as discussed above, Biafore’s cable slot 126, as depicted in Figures 8 and 9, does not extend “substantially the entire length” of the crossbow track (Biafore’s barrel 104) as the Examiner states. Moreover, Biafore teaches securing mounting rail 230 to a bottom surface of bottom wall 114 of lower portion 113 of barrel 104 for mounting typical crossbow accessories. Biafore ¶ 98. Biafore does not teach using cable slot 126 for mounting crossbow accessories. The Examiner’s rationale that it would have been obvious to modify Bednar “to include the passage extending the entire length of a crossbow track as taught by Biafore to allow an accessory or cable to be positioned along the entire length of a crossbow track” (Final Act. 4–5, 6), therefore, lacks a proper evidentiary underpinning.

In an apparent attempt to buttress the Examiner’s determination that it would have been obvious to modify Bednar’s cable slot 126 to extend substantially the entire length of the crossbow track, citing *In re Dailey*, 357 F.2d 669 (CCP 1966), the Examiner appears to dismiss the length of Bednar’s barrel slot 14 as a mere matter of choice having no significance. Final Act. 4–5, 6. The Examiner adds that, although Bednar may not

explicitly teach such, “one of ordinary skill in the art would readily see that [a passage could be extended along the entire length of the crossbow track] to provide further positioning options for an attached accessory.” *Id.* at 5, 6.

Offering an additional rationale, the Examiner directs our attention to paragraph 83 of Biafore, with its teaching that “if desired, the barrel 104 may have further openings or slots provided therein or therethrough in order to lessen the weight of the barrel 104 and, thus, the weight of the crossbow 100.” Ans. 4 (italics omitted). According to the Examiner, in view of this teaching, “one of ordinary skill in the art would have found it obvious that the slot of Bednar can be extended further to provide the advantage of reducing the weight of the crossbow.” *Id.*

These rationales offered by the Examiner are insufficient in supporting a modification of Bednar to extend barrel slot 14 substantially the entire length of the track (barrel 12) because, as Appellant points out, extending Bednar’s barrel slot to extend substantially the entire length of the barrel would weaken the barrel, even if not to such a degree as to render the barrel “inoperable” as Appellant contends. *See* Appeal Br. 25. In this regard, modifying Bednar’s barrel by lengthening barrel slot 14 to extend substantially the entire length of the barrel is *significant*, and, thus, would not amount to a mere design choice of the type discussed in *In re Dailey*. Even assuming the wall structure of Bednar’s barrel is thick enough, or could be made thick enough, to withstand or offset the weakening effect of a cable slot extending substantially the entire length of the barrel, the wall thickness clearly affects the weight of the barrel, and the Examiner does not present sufficient evidence or technical reasoning to establish, by a preponderance of the evidence, that the net effect of extending Bednar’s

cable slot substantially the entire length of the barrel would be a barrel of sufficient strength and rigidity having reduced weight. Thus, a person having ordinary skill in the art would not have been prompted to extend Bednar's barrel slot 14 substantially the entire length of barrel 12 in order to reduce the weight of the barrel. Rather, a skilled artisan considering the use of a slot to reduce the weight of a barrel would be inclined to provide a plurality of intermittent shorter slots, separated by connecting wall structure, in the barrel, as taught, for example, by Biafore. *See* Biafore ¶¶ 82, 83 (teaching opening 123 in top wall 121 of upper portion 112, opening 127 in upper wall 115 of lower portion 113, and cable slot 126 extending from forward end 110 of barrel 104 to connecting walls 124, 125, and suggesting providing "further openings or slots" in or through barrel 104 "in order to lessen the weight of barrel 104").³ The use of shorter intermittent slots, separated by connecting wall structure, would permit weight reduction without unduly sacrificing the strength or rigidity along the length of the barrel.

Even assuming the Examiner is correct that a passage *could* be extended along the entire length of Bender's crossbow track to provide further positioning options for an attached accessory (Final Act. 5), it is not apparent why a person having ordinary skill in the art would have been

³ Biafore's use of the term "therethrough" cannot reasonably be interpreted as suggesting a slot extending through the entire longitudinal length of the side of barrel 104 because connecting structure, such as connecting walls 124, 125, connecting upper portion 112 and lower portion 113, would be eliminated, thereby breaking the connection between upper and lower portions.

prompted to do so.⁴ Bednar shows bowstring 18 passing through barrel slot 14 and discloses mounting bow dampeners 100, using barrel mounts 108, 108', in barrel slot 14. *See* Bednar ¶¶ 22, 30–31; Figs. 2, 9, 13. Although barrel slot 14 allows a degree of selective positioning of bow dampeners 100 in barrel 12, given the function of bow dampeners 100, a skilled artisan would have no reason to mount bow dampeners beyond the point where bowstring 18 passes through barrel slot 14. *See id.* ¶ 22. The Examiner does not point to any indication in Bednar of a desire to attach other accessories to barrel 12, much less to do so using barrel slot 14. As mentioned above, Biafore teaches mounting typical crossbow accessories using a mounting rail secured to a bottom surface of the barrel. *See* Biafore ¶ 98. The Examiner does not direct our attention to any evidence that typical crossbow accessories would be configured for attachment via barrel slot 14. Thus, the Examiner's rationale regarding modifying Bednar's barrel slot 14 to extend substantially the entire length of the barrel to provide positioning options for an attached accessory appears to stem from impermissible hindsight reasoning using Appellant's disclosure as a template to reconstruct Appellant's invention. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (warning that "[a] factfinder should be aware . . . of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning").

⁴ *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only could have made but would have been motivated to make the combinations or modifications of prior art to arrive at the claimed invention.”).

The Examiner provides an “Exhibit A– Biafore Figure 8,” which is an annotated version of Figure 8 of Biafore including an annotation “Cavity along the Entire Track” with a reference line that appears to point, not to cable slot 126, but, rather, to a channel formed between upper portion 112 and lower portion 113 of barrel 104 and defined in part by inwardly curved connecting wall 124. Final Act. 16; Ans. 5. With reference to this Exhibit A, the Examiner states that Biafore “does teach a cavity on either side of the crossbow track which extends the entire length of the track.” Final Act. 16. The Examiner further states that “[a]lthough the [E]xaminer cites 126 in the final rejection, citation is also made to Figure 8 which further includes additional full length slots.” Ans. 5. This channel, as well as its counterpart on the other side of barrel 104 formed between upper portion 112 and lower portion 113 and defined in part by curved connecting wall 125, appears to extend the entire length of barrel 104 and could reasonably be considered to be a longitudinal cavity, with a longitudinal passage formed between the junctions between connecting wall 124 or 125 and side wall 119 or 120 of upper portion 112 and side wall 116 or 117 of lower portion 113. *See* Biafore ¶ 82; Figs. 9, 10. However, the Examiner’s rejection rests on a determination that it would have been obvious to extend Bednar’s barrel slot 14 the entire length of the track. *See* Final Act. 4, 5 (reading the longitudinal passage and longitudinal cavity on Bednar’s barrel slot 14); *id.* at 4–5, 6 (determining it would have been obvious to modify “Bednar to include the passage extending the entire length of a crossbow track as taught by Biafore to allow an accessory or *cable* to be positioned along the entire length of a crossbow track”) (emphasis added); *id.* at 17 (reasoning that “the extension of [a length of a slot is] a matter of design choice”); Ans. 4

(reasoning that it would have been obvious to extend Bednar’s slot “further to provide the advantage of reducing the weight of the crossbow”). For many of the reasons discussed above, Biafore’s teaching of a channel or cavity, formed in part by the curved connecting walls, would not have prompted a person having ordinary skill in the art to extend Bednar’s barrel slot 14 substantially the entire length of the barrel.

The Examiner also characterizes elongated rail slot 122 in Bednar’s Figure 8 as a “slot[] on a crossbow track, which can be considered to extend substantially the entire length of the track.” Ans. 4. Although Bednar’s elongated rail slot 122 extends along the entire length of barrel 104, elongated rail slot 122 is in the top surface and corresponds more reasonably to the “arrow track” recited in claims 1 and 14, and not to either the longitudinal cavity or the longitudinal passage in a side surface. It is not apparent, and the Examiner makes no attempt to explain, why a skilled artisan would consider the extent of Biafore’s elongated rail slot 122 to be at all instructive as to the extent of a longitudinal slot, passage, or cavity in a side surface of the barrel.

For the above reasons, the Examiner fails to articulate a sufficient reason, with rational underpinnings, to modify Bednar to arrive at the subject matter of independent claims 1 and 14. Accordingly, we do not sustain the rejection of claims 1 and 14, or their dependent claims 19 and 20, as unpatentable over Bednar and Biafore.

*Obviousness Based on Bednar, Biafore, and One or More of
Sedlmeier and Park*

The Examiner’s application of Sedlmeier and Park in rejecting claims 2–13 and 15–18, which depend, directly or indirectly, from claim 1 or

claim 14, does not make up for the aforementioned deficiency in the rejection of claims 1 and 14. *See* Final Act. 9–15. Accordingly, we do not sustain these rejections.

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we reject claims 1, 14, 19, and 20 under 35 U.S.C. § 102(a)(1) as anticipated by Biafore.

Regarding claims 1 and 14, Biafore discloses a crossbow track (barrel 104) having a top surface (top wall 121), a first side surface (side walls 119, 116), and a second side surface (side walls 120, 117), with the top surface including an arrow track (elongated rail slot 122). The first side surface includes a first longitudinal passage (defined between the junction between connecting wall 124 and side wall 119 and the junction between connecting wall 124 and side wall 116) leading to a first longitudinal cavity (formed between side walls 119 and 116 and defined in part by connecting wall 124). The second side surface includes a second longitudinal passage (defined between the junction between connecting wall 125 and side wall 120 and the junction between connecting wall 125 and side wall 117) leading to a second longitudinal cavity (formed between side walls 120 and 117 and defined in part by connecting wall 125).⁵ The aforementioned junctions correspond to the claimed first upper and lower shoulders and the claimed second upper and lower shoulders. Further, the first and second longitudinal passages and cavities extend the entire length of the crossbow

⁵ These longitudinal cavities communicate with the interior of Biafore's barrel 104 via cable slot 126.

track (barrel 104), thereby satisfying both the “extend substantially the entire length of the crossbow track” limitation of claims 1 and 14 and the “extend the entire length of the crossbow track” limitation of claims 19 and 20.”

For the above reasons, Biafore anticipates the subject matter of claims 1, 14, 19, and 20.

No inference should be drawn from the absence herein of any other new grounds of rejection. *See* 37 C.F.R. § 41.50(b). *See also* Manual of Patent Examining Procedure (MPEP) § 1213.02 (9th ed., rev. 08.2017, Jan. 2018). Under 37 C.F.R. § 41.50(b), the Board may, in its decision, make a new rejection of one or more of any of the claims pending in the case. Since the exercise of authority under 37 C.F.R. § 41.50(b) is discretionary, no inference should be drawn from the decision to exercise that discretion with respect to some claims and grounds but not other claims or other potential grounds.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1, 14, 19, 20	103	Bednar, Biafore		1, 14, 19, 20	
2-4, 15-17	103	Bednar, Biafore, Sedlmeier		2-4, 15-17	
5, 18	103	Bednar, Biafore, Sedlmeier, Park		5, 18	
6-13	103	Bednar, Biafore, Park		6-13	
1, 14, 19, 20	102(a)(1)	Biafore			1, 14, 19, 20
Overall Outcome				1–20	1, 14, 19, 20

FINALITY AND TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

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REVERSED; 37 C.F.R. § 41.50(b)