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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WESLEY COX¹

Appeal 2017-011538
Application 14/444,733
Technology Center 3700

Before JAMES P. CALVE, MICHELLE R. OSINSKI, and
GEORGE R. HOSKINS, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Final Office
Action rejecting claims 1–18. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Mr. Cox and Xtreme Orthopedics, LLC are identified as the real parties in
interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Claims 1, 11, and 16 are independent. Claim 1 is reproduced below.

1. A therapeutic pressure strap for applying pressure to muscles of a limb, said pressure strap comprising:
 - an elongated flexible band for encircling the limb;
 - first and second adjustable cooperative fasteners for adjustably fastening said band about the limb, with said first fastener proximate a first end of said band and said second fastener proximate a second end of said band; and
 - a plurality of elongated pressure members attached to said band and positioned between said first and second fasteners,wherein a longitudinal axis of one or more of said plurality of elongated pressure members is positioned parallel to a longitudinal axis of said band,
- wherein said band includes a plurality of pockets for retaining said pressure members,
- wherein said band defines a channel between adjacent pockets,
- wherein said pockets are adapted to be oriented substantially perpendicular to a longitudinal axis of the limb during use whereby pressure members within said pockets are adapted to create discrete lines of pressure across the muscles of the limb.

REJECTIONS

Claims 1–9 and 11–18 are rejected under 35 U.S.C. § 103(a) as unpatentable over Puyana (US 4,243,028, issued Jan. 6, 1981) and Cantrell (US 5,591,121, issued Jan. 7, 1997).

Claim 10 is rejected under 35 U.S.C. § 103(a) as unpatentable over Puyana, Cantrell, and Gauvry (US 6,402,712 B1, issued June 11, 2002).

Claims 1–18 are rejected on the ground of non-statutory double patenting over claims 1–18 of U.S. Patent No. 8,821,425 B2 and Cantrell.

ANALYSIS

Claims 1–9 and 11–18 Rejected Over Puyana and Cantrell

Appellant argues the rejection of claim 1 and asserts that independent claims 11 and 16 are allowable for the same reasons. *See* Appeal Br. 5–8. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Puyana discloses a therapeutic pressure strap as recited in claim 1 including an elongated flexible band 12, fasteners 16, 22, with plural elongated pressure members 30 retained in a single pocket 28 and adapted to be oriented substantially perpendicular to a longitudinal axis of a limb in use. Final Act. 3–4. The Examiner finds that Cantrell teaches a limb restraint with adjacent pockets 42 separated by a channel 34. *Id.* at 4. The Examiner determines that it would have been obvious to provide Puyana with a plurality of adjacent, spaced pockets as taught by Cantrell to allow the elongated pressure members to be removed and replaced individually on the band and to permit air to flow between the limb and strap. *Id.*; Ans. 11.

Appellant argues that Cantrell teaches a hook and loop fastened seam to permit easy removal and replacement of cylindrical rigid reinforcing rods 28 so “the motivation is for the inclusion of a hook and loop seam, not the inclusion of a plurality of pockets.” Appeal Br. 7; Reply Br. 2. Appellant argues that combining Cantrell’s hook and loop seam with Puyana’s pocket does not motivate a user to modify the pocket of Puyana into two discrete pockets separated by a gap because Puyana teaches a single pocket for receiving and confining a pair of adjacently positioned cylindrical resilient members. Appeal Br. 7. Appellant also argues that Puyana’s single pocket of adjacently positioned resilient members teaches away from locating each resilient member in its own pocket separated by a gap. *Id.* at 7–8.

The issue is whether there is motivation to combine the prior art in the manner indicated by the Examiner. In this regard, the patent laws provide:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a) (pre-AIA); *see Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1372 (Fed. Cir. 2019) (internal citations omitted); *In re Nuvasive, Inc.*, 842 F.3d 1376, 1382 (Fed. Cir. 2016) (“Our precedent dictates that the PTAB must make a finding of a motivation to combine when it is disputed.” and the “analysis should be made explicit”) (internal citations omitted).

“[M]otivation to combine can be found explicitly or implicitly in the prior art references themselves, in market forces, in design incentives, or in ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent.’” *Arctic Cat Inc. v. Bombardier Recreational Prods. Inc.*, 876 F.3d 1350, 1359 (Fed. Cir. 2017) (quoting *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420–21 (2007)); *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (“[M]otivation to combine may be found explicitly or implicitly in market forces; design incentives; the ‘interrelated teachings of multiple patents’; ‘any need or problem known in the field of endeavor at the time of invention and addressed by the patent’; and the background knowledge, creativity, and common sense of the person of ordinary skill.”) (internal citation omitted). Analysis should be explicit with a rational underpinning to support the conclusion of obviousness. *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We find that the Examiner’s reason for modifying Puyana to place the individual pressure members 30 in separate pockets with a channel between the pockets, as claimed, based on the teachings of Cantrell, is supported by rational underpinnings. The Examiner correctly finds that Cantrell teaches to place individual elongated pressure members 46 in separate pockets 42 that are separated by a space to allow air flow between the supported limb and the limb splint 44, and to allow easy removal of the individual members for washing and/or replacement via a hook and loop fastened seam 40. Final Act. 4 (citing Cantrell, 4:16–19, 4:62–67); Ans. 11–13 (citing same).

These findings are supported by the express teachings of Cantrell to this effect. Specifically, Cantrell teaches that the parallel foam reinforcing cylinders 46 are placed in pockets with spaces between them “to allow for air flow between the limb and limb splint **44** or **36**.” Cantrell, 4:16–19. The individual rigid reinforcing rods 28 and foam reinforcements 30 also can be removed from each pocket 42 for washing or replacement. *Id.* at 4:62–67.

“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. Furthermore,

[A]n implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the “improvement” is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient.

DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1368 (Fed. Cir. 2006).

The Examiner reasons that modifying Puyana to place each resilient member 30 into a separate pocket would allow the resilient members to be replaced more easily, i.e., each resilient member would retain its original position even if another resilient member was removed to facilitate the ease of replacement, and a skilled artisan could interchange the hollow or solid pressure members as Puyana contemplates. Ans. 11. Puyana teaches to use reinforcing members that are cylindrical or other shapes, and solid or hollow to provide the desired flexibility and pressure. Puyana, 2:51–3:11.

The Examiner finds that using spaced pockets in Puyana would allow air flow between a limb and the strap to improve a user’s comfort and reduce sweating. Ans. 11 (citing Cantrell, 4:16–19, 4:62–67). Because Puyana’s device is used to treat tennis elbow (Puyana, 1:10–64), such air flow would improve the comfort of a user wearing Puyana’s device and ease removal of Puyana’s reinforcing resilient members 30 for cleaning. Cantrell, 4:16–67.

Cantrell’s teachings and the desire of artisans to improve devices and make them better and more efficient provide rational underpinnings for these proposed modifications of Puyana. *In re Ethicon, Inc.*, 844 F.3d 1344, 1351 (Fed. Cir. 2017) (normal desire of artisans to improve what already is known can provide the motivation); *DyStar*, 464 F.3d at 1368 (improve efficiency); *In re Berg*, 320 F.3d 1310, 1315 (Fed. Cir. 2003) (“As persons of scientific competence in the fields in which they work, examiners and administrative patent judges on the Board are responsible for making findings, informed by their scientific knowledge, as to the meaning of prior art references to persons of ordinary skill in the art and the motivation those references would provide to such persons. Absent legal error or contrary factual evidence, those findings can establish a prima facie case of obviousness.”).

Appellant's arguments do not apprise us of error in the Examiner's findings or determination of obviousness. Indeed, Appellant recognizes that Cantrell teaches the use of separate pockets with a reclosable hook and loop seam to facilitate the ease of removal of individual reinforcing members for washing or replacement. Appeal Br. 7; Reply Br. 2; Cantrell, 4:62–67.

Appellant's attorney argument that a skilled artisan would use only a reclosable hook and loop seam with Puyana's single pocket (Appeal Br. 7) is not persuasive because separate pockets provide an air gap for user comfort and ease the removal and/or replacement of reinforcing members. Ans. 11. Cantrell's teachings improve Puyana's device to treat tennis elbow and to facilitate the use of different pressure members to adjust the flexibility and pressure of the device. The improvements are consistent with Puyana's teaching of a device to treat tennis elbow with adjustable flexibility and pressure via replaceable members. *See* Puyana, 2:1–6, 2:45–61, 3:3–11.

Appellant's argument that Puyana's use of a single pocket to hold a pair of cylindrical members teaches away from Cantrell's teaching to use separate pockets for each member (Appeal Br. 7–8) is not persuasive. The prior art's mere disclosure of more than one alternative does not teach away from any of the alternatives absent a disclosure that criticizes, discredits, or otherwise discourages the claimed solution. Ans. 12 (quoting *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004)). Appellant does not identify any such negative teachings in Puyana, nor any teaching that separate pockets will not improve the flexibility and comfort of Puyana's device. *Cf. In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (“[A] reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant.”); Ans. 12.

Appellant further argues that Cantrell teaches longitudinal support members that run parallel to the length of the limb rather than encircling the limb and would not have been obvious to combine with Puyana. Appeal Br. 7. This argument amounts to an individual attack on the references because the Examiner finds that Puyana teaches a therapeutic strap with pockets that are substantially perpendicular to a longitudinal axis of a limb as claimed. Final Act. 3–4; Ans. 10. We agree with the Examiner’s determination that the benefits that Cantrell teaches for using separate, spaced pockets to hold resilient pressure members would improve Puyana’s device with predictable results. Furthermore, Appellant provides no argument or evidence that the benefits taught by Cantrell for using separate, spaced pockets are limited to straps that are oriented longitudinally, or are inapplicable to straps that are oriented substantially laterally to a limb, as in Puyana and as claimed.

The articulation of reasons supported by rational underpinnings for the proposed combination also addresses Appellant’s hindsight argument. Reply Br. 2; *see In re Cree, Inc.*, 818 F.3d 694, 702 n.3 (Fed. Cir. 2016) (holding that an argument of “impermissible hindsight” was answered by showing that the proffered combination was a predictable use of prior art elements according to their established functions). Arguing that the “Office has failed to provide a motivation to combine Cantrell with Puyana” (Reply Br. 2) also is not persuasive. *See* 37 C.F.R. § 41.37(c)(1)(iv); *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) (approving of the Board’s practice to require an applicant to identify the alleged error in the examiner’s rejection).

Thus, we sustain the rejection of claim 1, and claims 2–9 and 11–18, which fall therewith.

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Claim 10 Rejected Over Puyana, Cantrell, and Gauvry

Appellant does not present argument for this rejection. *See* Appeal Br. 5–8. Thus, we sustain this rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Claims 1–18 Rejected For Non-Statutory Double Patenting

Appellant does not present argument for this rejection. *See* Appeal Br. 5–8. Thus, we sustain this rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

We affirm the prior art rejections of claims 1–18.

We affirm the double patenting rejection of claims 1–18.

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