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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* GEORGE A. MIKHAIL and GLEN PIERSON

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Appeal 2015-000872  
Application 11/746,175  
Technology Center 3700

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Before JOHN C. KERINS, WILLIAM A. CAPP, and  
LEE L. STEPINA, *Administrative Patent Judges*.

CAPP, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the final rejection of claims 1–10, 20–23, 29, and 30. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

### THE INVENTION

Appellants' invention relates to a nail device for healing bone fractures of the elbow. Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. An olecranon osteotomy nail system, comprising:

a nail including a body portion and a head portion, the body portion having a longitudinal axis and at least two screw bores spaced apart along the longitudinal axis and disposed oblique to the longitudinal axis at opposing angles relative thereto, the head portion located proximally of the body and having a nail fastening arrangement disposed on a surface thereof; and

a nail cap having a distal portion and a proximal portion, the distal portion having a cap fastening arrangement disposed on an interior surface of a recess thereof that engages the nail fastening arrangement such that the nail cap receives the head portion in the recess and can be secured on the head portion of the nail and provide compression to reduce an olecranon fracture.

### THE REJECTIONS

The Examiner relies upon the following as evidence in support of the rejections:

Kim '402	US 5,480,402	Jan. 2, 1996
Russell	US 5,549,610	Aug. 27, 1996
Kim '908	US 5,743,908	Apr. 28, 1998
Lahille	US 5,743,912	Apr. 28, 1998

The following rejections are before us for review:

1. Claims 1–10, 29, and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lahille and Kim '402.

2. Claims 20, 21, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lahille, Kim '402 and Kim '908.

3. Claims 20 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lahille, Russell, and Kim '908.

OPINION

*Unpatentability of Claims 1–10, 29, and 30  
over Lahille and Kim '402*

*Claims 1–10*

Appellants argue claims 1–10 as a group. Appeal Br. 4–7. We select claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2015).

The Examiner finds that Lahille discloses the invention substantially as claimed except for oblique, spaced apart screw bores and screws disposed in the bores. Final Action 2–4. The Examiner relies on Kim '402 for the limitations directed to screws disposed in screw bores. *Id.* at 4–5. The Examiner concludes that it would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the device of Lahille with screws and screw bores as taught by Kim. *Id.* at 5. According to the Examiner, a person of ordinary skill in the art would have done this to resist deforming forces and provide rotational stability. *Id.*

Appellants traverse the Examiner's rejection by arguing against the combinability of the Examiner's applied references. In particular, Appellants argue that a person of ordinary skill in the art would not have had a reasonable expectation of success in modifying Lahille with screw bores as taught by Kim. Appeal Br. 5. Appellants contend that introduction of screw bores into the body of Lahille is contrary to the purpose of Lahille. *Id.*

[F]or the explicit purpose stated in Lahille, the smooth portion 31 must be free of any obstructing components such as screws threaded therethrough (particularly in a transverse direction). The design of the device in Lahille is specifically configured to keep the smooth portion 31 free of any components such as screws that might be threaded therethrough. The basic premise of Lahille is that it is a break from conventional implants that utilize transverse screws to hold the implant in place. Specifically, Lahille states that the

"fixing of the long branch of the plate to the diaphysis holds immobile the short branch on which a long screw bears in order to unite the femoral head fragment against the trochanter fragment." Lahille, col. 1, ll. 28–31. However, the problem addressed by Lahille is that these screws "cause an imbalance in the intracranial pressure in the bone fragments at the center of the site of the necrosis where vascular irrigation has been eliminated as a result of the fracture." *Id.* at col. 1, ll. 32–37.

Appeal Br. 5. Appellants argue that a “specific goal” of the device of Lahille is to remove transverse screws from smooth portion 31. *Id.* at 6. Appellants conclude that introduction of any screw hole into the smooth portion of Lahille and the insertion of any screw through this area is in direct contradiction to the teachings of Lahille. *Id.*

In response, the Examiner characterizes Appellants’ allegation that Lahille’s smooth portion must be free of any obstructing components such as screws threaded therethrough as a mere unsubstantiated conclusion. Ans. 9. The Examiner notes that the purpose of Lahille’s device is to immobilize fractures until healing can occur. *Id.* According to the Examiner, providing stability to Lahille’s device would assist with the purpose of Lahille, which is to stabilize bone fragments until consolidation of the bone fragments occurs. *Id.*

We think the Examiner has stated the more persuasive position. Regardless of Appellants’ view of the purpose of Lahille, it is well settled that the prior art need not serve the same purpose as that disclosed in Appellants’ Specification in order to support the conclusion that the claimed subject matter would have been obvious. *See In re Linter*, 458 F.2d 1013, 1016 (CCPA 1972). “A reference may be read for all that it teaches, including uses beyond its primary purpose.” *In re Mouttet*, 686 F.3d 1322,

1331 (Fed. Cir. 2012), *citing KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–421 (2007).

Kim '402 discloses an orthopedic apparatus for the repair of shoulder injuries. Kim '402, col. 1, ll. 49–51. The apparatus comprises an elongated intramedullary rod or pin with an enlarged self-tapping screw formed on its proximal end. *Id.* col. 2, ll. 37–42. The rod is provided with two angled cross bores 32 and 34 disposed at an acute angles to the longitudinal axis of the rod. *Id.* col. 2, ll. 43–52. Thus, it was known in the art prior to Appellants' invention to use screws and associated screw bores in a rod in connection with reducing bone fractures.

The obviousness inquiry requires a determination that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012). The presence or absence of a motivation to combine references in an obviousness determination is a question of fact. *See Par Pharm., Inc. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1196 (Fed.Cir.2014). “The reasonable expectation of success requirement refers to the likelihood of success in combining references to meet the limitations of the claimed invention.” *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016). In other words, “one must have a motivation to combine accompanied by a reasonable expectation of achieving what is claimed in the patent-at-issue.” *Id.*

Given the teachings of Kim '402 regarding the use of screws and screw bores in a rod used for reduction of bone fractures, a person of

ordinary skill in the art would have had a reasonable expectation of success in modifying Lahille's device with screws and screw bores as taught by Kim '402. In reaching this determination, we note that Appellants present no evidence that their claimed device achieves unexpected results.

In view of the evidence presented by the Examiner, we are persuaded that Appellants' claimed apparatus is merely a predictable variation of the prior art that falls within the ambit of ordinary skill. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it and if a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability). We have considered Appellants' other arguments, including arguments advanced in the Reply Brief, and find them to be without merit. Reply Br. 2–5. The Examiner's findings of fact are supported by a preponderance of the evidence and the Examiner's legal conclusion of unpatentability is well-founded. Accordingly, we sustain the Examiner's unpatentability rejection of claims 1–10.

*Claim 29*

Claim 29 depends from claim 1 and adds the limitation: “wherein the distal portion of the nail cap has a first diameter and the proximal portion of the nail cap has a second diameter greater than the first diameter, the proximal portion sized and shaped to engage an exterior surface of a bone to provide the compression.” Claims App. The Examiner finds that this limitation is satisfied by Lahille. Final Action 3.

Appellants argue that the end piece of Lahille corresponding to the proximal portion of the nail cap never engages an exterior surface of the

bone. Appeal Br. 8. Appellants rely on *In re Giannelli*, 739 F.3d 1375 (Fed. Cir. 2014) for the proposition that an Examiner cannot base a rejection on a personal viewpoint of what the prior art invention is capable of and, instead, must show that prior art “specifically describes” the same function as recited in the claim. *Id.*

In response, the Examiner states that the nail cap of Lahille (Fig. 7, refs 4, 5, and 6) satisfies the structural limitations imposed by claim 29 and is capable of engaging an exterior surface of a bone to provide compression as claimed. Ans. 10. The Examiner points out that the functional limitation of claim 29 involves not only the structure of the device, but also the structure of the bone itself. *Id.* The Examiner observes that if a surgeon drills a hole that is smaller than the diameter of the top portion of Lahille’s nail cap, the nail cap would be capable of pressing against the bone adjacent the smaller diameter hole and, therefore, would be capable of compressing the bone as claimed. *Id.* at 11.

In reply, Appellants raise, for the first time, the assertion that the claimed invention is structurally distinct from Lahille in that Lahille is “substantially cylindrical” and has a “constant diameter” along its length. Reply Br. 5.

Appellants’ “constant diameter” argument is untimely and will not be considered. *See* 37 C.F.R. § 41.41(a)(2) (2015). By raising this argument for the first time in the Reply Brief, Appellants have effectively deprived the Examiner of an opportunity to respond. Even if we were inclined to consider the argument, a cursory inspection of Figure 7 shows that element 4 has a first, smaller diameter at one end and a second, larger diameter at the other end. Lahille, Fig. 7, element 4; *see also* col. 9, ll. 33–61.

We think the Examiner is correct in finding that Lahille, element 4, is capable of engaging an exterior surface of a bone to provide compression. Ans. 10. As long as the hole drilled in the bone is smaller in diameter than element 4, element 4 would engage the exterior surface of the bone and engaging the threaded connections on Lahille's device would provide the requisite compression. Where all the structural elements of a claim exist in a prior art product, and that prior art product is capable of satisfying all functional or intended use limitations, the claimed invention is nothing more than an unpatentable new use for an old product. *Bettcher Ind. Inc. v. Bunzl USA, Inc.*, 661 F.3d 629, 654 (Fed. Cir. 2011).

Appellants' reliance on *Giannelli* is misplaced. *Giannelli* involved an exercise apparatus. The issue in *Giannelli* was whether handles for a chest press device that enabled a pushing motion by an operator were capable of being used as handles for a rowing, pulling motion. In reversing the Board on the issue of the handles were capable of being used as claimed, the Federal Circuit took into account the posture and position of the operator in concluding that the handles were not adapted for such use. 739 F.3d at 1380 ("anyone who has used exercise machines knows that a sure-fire way to cause injury is to use a machine in a manner not intended by the manufacturer."). In the instant case, the Examiner finds, correctly, that Lahille is capable of engaging an exterior surface of a bone to provide compression. Ans. 10. Thus, the disposition of this case properly follows *Bettcher*, not *Giannelli*.

In view of the foregoing, we sustain the Examiner's rejection of claim 29.

*Claim 30*

Claim 30 depends from claim 29 and adds the limitation: “wherein the proximal portion of the nail cap is sized to engage a countersink on the exterior surface of the bone.” Claims App. The Examiner finds this limitation to be met by Lahille. Final Action 3 (citing Lahille Fig. 7).

Appellants take the position that the compression recited in claim 1, at least for purposes of claim 30, includes a countersink on the exterior surface of the bone. Appeal Br. 7. Appellants contend that the countersink has dimensions configured to engage the nail cap. *Id.* (citing Spec. ¶ 107, “the proximal portion of the nail cap is sized and shaped such that it is ‘at least partially countersunk into a countersink formed by a drill bit.’”). Appellants argue that Lahille achieves compression only from engagement with an interior surface of the bone. *Id.* at 7–8.

Appellants’ argument is unpersuasive for essentially the same reasons expressed above with respect to claim 29. Appellants, furthermore, acknowledge that Lahille’s element 4 engages an interior surface of the bone which is tantamount to an admission that Lahille discloses a countersink bore. Thus, a preponderance of the evidence supports the Examiner’s finding that Lahille is capable of engaging a countersink as claimed.

Accordingly, we sustain the Examiner’s rejection of claim 30.

*Unpatentability of Claims 20–23*

Claim 20 is an independent claim and claims 21–23 depend therefrom. Claims App. In traversing the rejection of these claims, Appellants rely solely on arguments that we have previously considered and found unpersuasive and which are equally unpersuasive here. Appeal Br. 10–12, Reply Br. 7–9. We sustain the rejections of claims 20–23.

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DECISION

The decision of the Examiner to reject claims 1–10, 20–23, 29, and 30 is affirmed.

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