

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ORTHOPEDIATRICS CORP.,
Petitioner,

v.

K2M, INC.,
Patent Owner.

Case IPR2018-00521
Patent 9,532,816 B2

Before LYNNE H. BROWNE, MICHAEL L. WOODS, and
ROBERT L. KINDER, *Administrative Patent Judges*.

BROWNE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Orthopediatrics Corp. (“Petitioner”), on January 8, 2018, filed a Petition requesting *inter partes* review of claims 16, 18, 19, 21, and 22 of U.S. Patent No. 9,532,816 B2 (“the ’816 patent”). (Paper 1, “Pet.”). We issued a Decision to Institute an *inter partes* review (Paper 8, “DI”) of all challenged claims (16, 18, 19, 21, and 22) under all grounds, namely Grounds 1–8 discussed below.

After institution of trial, K2M, Inc. (“Patent Owner”) filed a Patent Owner Response (Paper 20, “PO Resp.”), to which Petitioner replied (Paper 26, “Pet. Reply”). Patent Owner also filed a Sur-Reply (Paper 31, “PO Sur-Reply”).

Oral argument was concurrently conducted on February 21, 2019, for this and related proceeding IPR2018-00429, and the transcript of the hearing has been entered as Paper 37.

We have jurisdiction under 35 U.S.C. § 318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner has not met its burden of showing, by a preponderance of the evidence, that any of claims 16, 18, 19, 21, and 22 are unpatentable.

II. BACKGROUND

A. *Related Proceedings*

Petitioner is a defendant in a lawsuit involving the ’816 patent. Pet. 1 (referencing *K2M, Inc. v. OrthoPediatrics Corp. & OrthoPediatrics US Distribution Corp.*, Case No. 1:17-cv-00061-GMS (D. Del.)).

On the same day that the Petition in the instant proceeding was filed, Petitioner filed another petition requesting *inter partes* review challenging

claims 16, 18, 19, 21, and 22 of the '816 patent. IPR2018-00429. The final decision in that proceeding is being issued concurrently with this decision. Subsequently, Petitioner filed three Petitions challenging claims 1, 3, 5, 6, 8–10, 12, and 15–19 of U.S. Patent No. 9,655,664 B2 which is a divisional of the '816 patent. IPR2018-01546, 1547, 1548.

B. The '816 Patent

The '816 patent is directed to “devices for stabilizing and fixing the bones and joints of the body. Particularly, the present invention relates to a manually operated device capable of reducing a rod into position in a rod receiving notch in the head of a bone screw with a controlled, measured action.” Ex. 1101, 1:14–19. The device described in the '816 patent achieves this objective by grasping “the head of a bone screw and reduc[ing] a rod into the rod receiving recess of the bone screw using a single manual control that can be activated in a controlled and measured manner.” *Id.* at 2:23–27.

Figure 4 reproduced below illustrates the device:

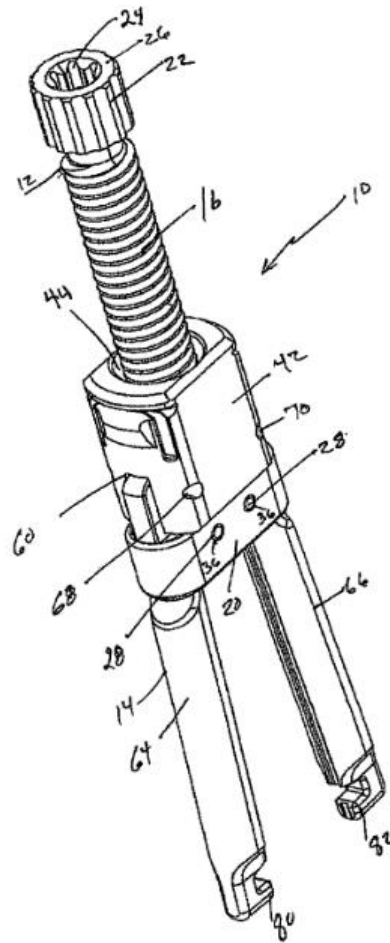


FIG 4

Figure 4 is an isometric view of the rod reducing device with the screw jack mechanism fully retracted and the two elongated grasping members in an open configuration. Ex. 1101, 3:27–30.

The '816 patent explains:

The device . . . is a rod [34] reduction device capable of reducing a rod into position in a rod receiving notch in the head of a bone screw with a controlled, measured action. The device is an elongated rod reduction device 10 that includes a screw jack mechanism 12 moveably engaged with an elongated grasping fork assembly 14. The screw jack mechanism 12 includes an

elongated threaded screw shaft 16 that terminates at its most proximal end with a controlling member 18 and terminates at its most distal end with a rod contact member 20.

Id. at 3:63–4:5.

C. Illustrative Claim

Petitioner challenges claims 16, 18, 19, 21, and 22 of the '816 patent.

Claim 16, reproduced below, is the challenged independent claim.

16. A rod reducing device comprising:
a housing defining a longitudinal axis, the housing including first and second grasping members configured to grasp a portion of a bone anchor therebetween, the first and second grasping members defining a plane;
a rotatable member extending through the housing along the longitudinal axis; and
a rod contact member positioned at a distal end of the rotatable member, the rod contact member translatable along the longitudinal axis in response to rotation of the rotatable member about the longitudinal axis, wherein the rod contact member and the rotatable member are translatable within the plane defined by the first and second grasping members.

Ex. 1101, 10:22–35.

D. References Relied Upon

The Petitioner relies in relevant part on the following references

(*See* Pet. 4):

Name	Reference	Ex. No.
Whipple	US 2006/0293692 A1, published Dec. 28, 2006	1102
Runco	US 2006/0079909 A1, published Apr. 13, 2006	1103
Varieur	US 2005/0149053 A1, published July 7, 2005	1104
Jackson	US 2005/0192570 A1, published Sept. 1, 2005	1105
Trudeau	US 2006/0089651 A1, Published Apr. 27, 2006	1106

E. The Asserted Grounds of Unpatentability

Petitioner asserts the challenged claims are unpatentable on the following grounds:

Reference(s)	Basis	Claim(s) challenged
Whipple (Fig. 11A) ¹	§ 102(e)	16, 18, 19, 21, and 22
Whipple (Fig. 11A) and Runco	§ 103(a)	22
Whipple (Fig. 11C)	§ 102(e)	16, 18, 19, 21, and 22
Whipple (Fig. 11C) and Runco	§ 103(a)	16, 18, 19, 21, and 22
Varieur	§ 102(b)	16, 18, 19, and 21
Varieur and Runco	§ 103(a)	22
Jackson	§ 102(b)	16, 18, 19, 21, and 22
Jackson and Trudeau	S 103(a)	18

Pet. 4. Petitioner supports its challenge with the Declaration of Ottie Pendleton, dated January 22, 2018 (Ex. 1107). Patent Owner supports its opposition to these challenges with the Declaration of Troy Drewry, dated September 14, 2018 (Ex. 2021).

¹ “[I]n order to show anticipation, the proponent must show ‘that the four corners of a single, prior art document describe every element of the claimed invention.’” *Net MoneyIn, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). In this proceeding, however, Petitioner presents two separate challenges based on anticipation by Whipple and distinguishes between these challenges by referring to the first as based on anticipation by “Whipple (Fig. 11A)” and the second as based on anticipation by “Whipple (Fig. 11C).” Pet. 10–26, 29–44. Although these grounds are more properly referred to as alternative grounds of anticipation by Whipple, for consistency and clarity we adopt Petitioner’s nomenclature while remaining fully cognizant that technically these grounds are based on the same prior art reference.

III. ANALYSIS

A. *Claim Construction*

In our Decision to Institute *Inter Partes* Review, we construed the terms “housing” and “extending through the housing” and declined to construe, as unnecessary to that decision, the term “grasping.” Dec. 8–11. In this Final Written Decision, we also decline to construe “grasping” and maintain our construction of “housing” and “extending through the housing,” as set forth in our Decision to Institute. *Id.* In accordance with our definition of “housing,” we understand that claim term to be “the fixed portion of the rod reducing device that defines the body through passage.” *Id.* at 10.

Central to our decision below (Part III.C), regarding Petitioner’s second challenge based on anticipation by Whipple (FIG. 11C), is whether claim 16 requires a rotatable member and a rod contact member that are separate components. Claim 16 sets forth “a rotatable member extending through the housing along the longitudinal axis; and a rod contact member positioned at a distal end of the rotatable member.” Patent Owner contends that the rotatable member and rod contact member are separate components. *See, e.g.*, PO Resp. 31. Conversely, Petitioner maintains that “under BRI, ‘[c]laim 16 does not preclude a rod contact member that is part of the rotatable member.’” Pet. Reply 14 (*citing* Dec. 19) (emphasis omitted). We address this issue in detail below.

1. *Principles of Claim Construction*

In this proceeding, we determine the meaning of a claim using the “broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b) (2017); *Cuozzo Speed Techs., LLC*

v. Lee, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation approach).²

In addition to the specification, the prosecution history plays an important role in claim construction. *Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973, 977 (Fed. Cir. 2014) (“In claim construction, this court gives primacy to the language of the claims, followed by the specification. Additionally, the prosecution history, while not literally within the patent document, serves as intrinsic evidence for purposes of claim construction. This remains true in construing patent claims before the PTO.” (citing *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997))). Indeed, the U.S. Court of Appeals for the Federal Circuit has indicated, in the context of an *inter partes* review, that “[t]he PTO should . . . consult the patent’s prosecution history in proceedings in which the patent has been brought back to the agency for a second review.” *Microsoft Corp. v Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015).

2. *Express Claim Language*

Claim 16 introduces the rotatable member and rod contact member in separate phrases which indicates that they are separate components of the rod reducing device. Ex. 1101, 10:27–30. Further, the claim expressly locates the rod reducing device at the distal end of the rotatable member, rather than indicating that it is the distal end of the rotatable device. *Id.* at

² On October 11, 2018, the USPTO revised its rules to harmonize the Board’s claim construction standard with that used in federal district court. *See Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018). This rule change, however, applies to petitions filed after November 13, 2018, and does not apply to this proceeding. *Id.*

10:29–30. Thus, the express language of claim 16 reasonably supports Patent Owner’s position that the rotatable member and the rod contact member are separate components.

3. *Specification*

The specification does not use the claim term “rotatable member.” Instead, the specification describes elongated threaded screw shaft 16 of screw jack mechanism 12, which we understand to correspond to the claimed rotatable member. Ex. 1101, 4:2–3; *see also* Ex. 2021 ¶ 51 (describing the movement of elongated screw shaft 16). The specification describes rod contact member 20 as “connected to the distal end of the elongated threaded screw shaft 16 . . . by contact member retention pins 28.” Ex. 1101, 4:29–42. Elongated threaded screw shaft 16, rod contact member 20, and contact member retention pins are illustrated in Figure 4, reproduced again below:

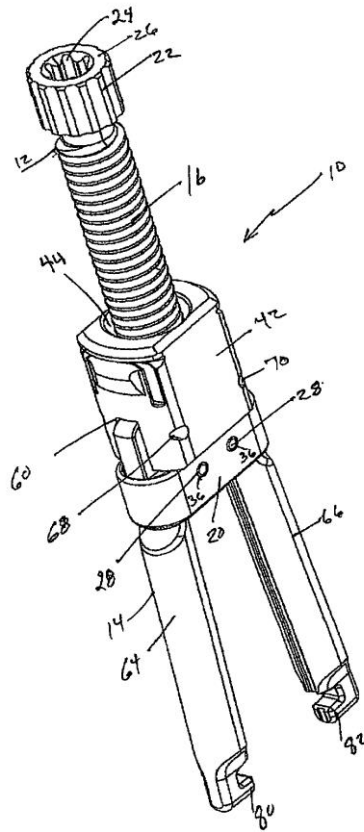


FIG 4

Figure 4 is an isometric view of the rod reducing device. *Id.* at 3:27–28. Given that elongated threaded screw shaft 16 and rod contact member 20 are illustrated as separate components and the description in the specification that these components are connected via contact member retention pins 28 (also shown illustrated above), the specification also supports Patent Owner’s position that the rotatable member and the rod contact member are separate components.

4. *Prosecution History*

During prosecution, the Examiner considered the rotatable member and rod contact members to be separate components. For example, in

rejecting claim 17,³ based on anticipation by Jackson '751 (US 5,720,751, issued Feb. 24, 1998),⁴ the Examiner identified element 16 of Jackson '751 as corresponding to the claimed rotatable member and element 15 as corresponding to the claimed rod contact member. Ex. 2001, 73. Jackson '751 describes element 15 as a pusher bar or rod engaging member and element 16 as a stem. Ex. 3001, 6:27–28. Jackson states that pusher bar 15 and stem 16 are components of spinal rod pusher assembly. *Id.* Thus, the prosecution history supports Patent Owner's position that the rotatable member and the rod contact member were understood to be separate components.

5. *Summary*

Upon reviewing the explicit claim language, the specification, and the prosecution history, we conclude that the rotatable member and rod contact member of claim 16 are separate components.

B. *Principles of Law*

To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *Net MoneyIN*, 545 F.3d at 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). “A reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention.” *In re Graves*, 69 F.3d 1147, 1152 (Fed. Cir. 1995) (internal citation and emphasis omitted).

³ Then pending claim 17 was renumbered as claim 16 in the '816 patent.

⁴ We attach a copy of Jackson '725 as Exhibit 3001 for ease of reference.

Moreover, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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 ordinary skill in the art; and, when presented, (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We analyze the asserted grounds of unpatentability in accordance with the above-stated principles.

*C. Anticipation of Claims 16, 18, 19, 21 and 22
by Whipple (Fig. 11A)*

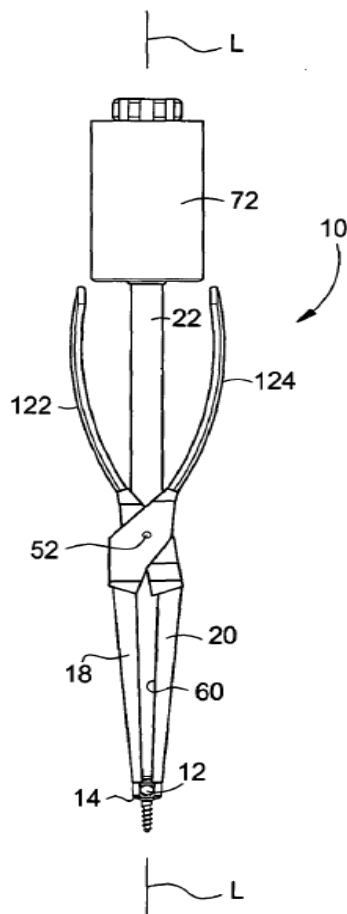
Petitioner contends that claims 16, 18, 19, 21, and 22 are anticipated by Whipple (Fig. 11A). Pet. 10–26. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims are anticipated by Whipple (Fig. 11A). We begin our analysis with a brief overview of features of Whipple which are common to Figures 11A and 11C, followed by an overview of the embodiment shown in Figure 11A.

Next, we address the parties' contentions, and then we discuss our reasoning. Our analysis focuses on independent claim 16, from which all other challenged claims depend.

1. *Whipple*

Whipple is directed to "instruments and methods for manipulating a spinal fixation element, such as a spinal rod, relative to a bone anchor, such as a polyaxial or monoaxial bone screw." Ex. 1102 ¶ 5. Figure 2, reproduced below, illustrates Whipple's instrument:

FIG. 2



Whipple's Figure 2 is a front view of the instrument. *Id.* ¶ 11. Instrument 10 shown in Figure 2 is configured to manipulate "a spinal fixation element 12, such as, for example, a spinal rod, a plate, a tether or cable or combinations thereof, relative to a bone anchor 14." *Id.* ¶ 26. Instrument 10 includes "bone anchor grasping mechanism 18 . . . includ[ing] a first arm 24 having a distal end 26" and "first adjustment mechanism 20 . . . includ[ing] a second arm 50 that is pivotally connected to the first arm 24." *Id.* ¶¶ 28, 31. Instrument 10 also includes "second adjustment mechanism 22 . . . coupled to the first arm 24 and/or the second arm 50" comprising "elongated tubular body 60 having a proximal end 62 and a distal end 64 and a lumen 66 extending between the proximal end 62 and the distal end 64." *Id.* ¶ 34.

Figure 9, reproduced below, illustrates an alternative embodiment of Whipple's instrument:

FIG. 9

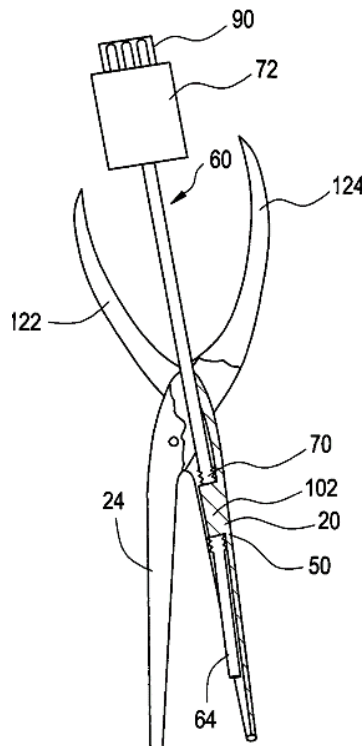


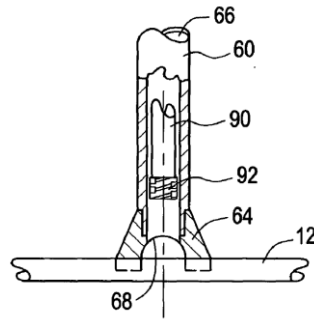
Figure 9 is a side view of an alternative embodiment of Whipple's instrument. Whipple ¶ 18. In this embodiment, "collar 102 may be integral to the second arm 50 of the instrument 10. Alternatively, collar 102 may be integral to first arm 24 or be formed by both first arm 24 and second arm 50." *Id.* ¶ 38. "[C]ollar 102 may be configured to allow the tube 60 to advance distally without rotation." *Id.* ¶ 39. "For example, the collar 102 may include a threaded member 106 that is movable in a direction perpendicular to the tube 60 to allow the threaded member 106 to selectively engage the threads 70 on the tube 60." *Id.* Whipple explains,

[T]he threaded member 106 is movable between a first position in which the threaded member 106 engages the external threads 70 in the tube 60 . . . and a second position in which the threaded member 106 disengages the external threads 70 on the tube 60 to permit axial motion of the tube 60 without rotation.

Id. "In this manner, the tube 60 may be quickly advanced, without the need for rotation, into contact with the spinal fixation element 12." *Id.*

Whipple also discloses alternative embodiments of distal end 64 of tube 60. One such embodiment is illustrated in Figure 11A reproduced below:

FIG. 11A



Whipple's Figure 11A is a side view of an embodiment of distal end of an adjustment mechanism for interacting with a spinal fixation element. *Id.* ¶ 20.

Distal end 64 of tube 60 is described as “indirectly or directly contact[ing] the spinal fixation element 12 to adjust the spinal fixation element 12 in the second direction.” Ex. 1102 ¶ 35. Whipple states, “in the illustrated embodiment, the tube 60 may be advanced with the closure mechanism delivery instrument 90 and the closure mechanism 92 may be positioned distal to the distal end 64 of the tube 60.” *Id.* Whipple explains that “closure mechanism 92 may contact the spinal fixation element 12 and, thus, the tube 60 may adjust the spinal fixation element 12 through the closure mechanism 92.” *Id.* Whipple further indicates that “the distal end 64 may be forked or bifurcated to engage the spinal fixation element 12 on opposing sides . . . the distal end 64 may have an arcuate contact surface 68

having a curvature approximate to the curvature of the spinal fixation element 12.” *Id.*

2. *Petitioner’s Challenge*

Petitioner maps elements from Whipple to each limitation of claims 16, 18, 19, 21, and 22. Pet. 10–26. In particular, Petitioner submits that Whipple’s tube 60 corresponds to the claimed rotatable member. *Id.* at 15–16. Specifically, Petitioner asserts that “Whipple discloses the claimed ‘rotatable member extending through the housing along the longitudinal axis’ as recited in claim 16.” *Id.* at 15. Petitioner quotes Whipple’s statement that

“[the] coupling mechanism 100 [the claimed housing] . . . is configured to receive the second adjustment mechanism 22, e.g., tube 60 [the claimed rotatable member], and permit motion of the second adjustment mechanism 22 relative to the first arm 24 [the claimed first grasping member] and/or the second arm 50 [the claimed second grasping member].”

Id. at 15–16 (emphasis omitted) (*citing* Ex. 1102 ¶ 36). According to Petitioner, “Whipple further discloses that ‘[r]otation of the tube 60 relative to the collar 102 causes the tube 60 to advance distally or proximally, depending on the direction of rotation, relative to the first arm 24 and the second arm 50.’” *Id.* at 16 (bracketed information and emphasis omitted) (*citing* Ex. 1102 ¶ 36).

3. *Patent Owner’s Response*

Among other contentions, Patent Owner contends that “Petitioner fails to demonstrate that the embodiment of Whipple (FIG. 11A) teaches the claimed ‘rotatable member.’” PO Resp. 33. In support of this contention, Patent Owner asserts that “tube 60 of FIG. 11A cannot rotate due to tube 60’s configuration and the ‘forked’ or ‘bifurcated’ distal end 64.” *Id.* (*citing*

Ex. 2021 ¶¶ 157–161). Patent Owner explains that (1) “tube 60 cannot rotate when arcuate contact surface 68 of distal end 64 engages with, or straddles, the rod 12,” (2) “a POSITA would understand embodiment FIG. 11A only relates to FIG. 9, for which Whipple explicitly states that tube 60 is ‘quickly advanced, *without the need for rotation*,” and (3) “tube 60 and distal end 64 are unable to rotate because the ‘bifurcated’ or ‘forked’ shape of distal end 64 would hit arm 50 and any rotation would be halted.” *Id.* (citations omitted). Thus, according to Patent Owner, “tube 60 in the embodiment of Whipple FIG. 11A **does not and cannot** rotate and therefore fails to disclose the claimed ‘rotatable member.’” *Id.* (citing Ex. 2021 ¶ 161).

Patent Owner also contends that Whipple does not disclose a rotatable member and a separate rod contact member. PO Resp. 31. This contention is discussed at length below in Part III.E. Although, our analysis below is equally applicable to this challenge, it is not necessary to our decision for this challenge. Accordingly, we do not discuss Patent Owner’s contention in this section.

4. Analysis

Having considered Patent Owner’s arguments and the full record developed during trial, we determine Petitioner has not shown the challenged claims to be unpatentable.

As discussed above, this challenge is based on in Whipple (Fig. 11A), wherein distal end 64 of tube 60 is bifurcated or forked. Ex. 1102 ¶ 35. Although we agree with Petitioner that Whipple discloses embodiments wherein tube 60 is a rotatable member, we also agree with Patent Owner that

it is not clear the embodiment shown in Figure 11A is one of them. Rather, we credit the testimony of Patent Owner's Declarant, Mr. Drewry, that

a person of ordinary skill in the art would understand that the "bifurcated" or "forked" shape of distal end 64 would hit and interfere with the operation of arm 50. That is, the "bifurcated" or "forked" shape of distal end 64 would run into arm 50 and, therefore, be unable to rotate.

Ex. 2021 ¶ 160. Further, to the extent that any doubt remains as to whether tube 60 as illustrated in Figure 11A is rotatable, that doubt must be resolved in favor of Patent Owner's position, as Petitioner has the burden to show, by a preponderance of evidence, that the limitation pertaining to the rotatable member is met by Whipple (Fig. 11A).

5. Conclusion Regarding Whipple (Fig. 11A)

For the foregoing reason, we conclude that Petitioner fails to establish by a preponderance of evidence that Whipple (Fig. 11A) anticipates claim 16 in accordance with 35 U.S.C. § 102(e). For the same reason, we conclude that Petitioner fails to establish that Whipple (Fig. 11A) anticipates claims 18, 19, 21, and 22, which depend from claim 16 in accordance with § 102(e).

D. Obviousness of Claim 22 Based on Whipple (Fig. 11A) and Runco

Petitioner asserts that claim 22 is unpatentable under 35 U.S.C. § 103(a) based on Whipple (Fig. 11A) and Runco. Pet. 26. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that claim 22 would have been unpatentable over Whipple (Fig. 11A) and Runco. As an overview of Whipple is provided above, we begin

our analysis with a brief overview of Runco. Next, we address the parties' contentions, and then discuss our reasoning.

1. *Runco*

Runco is directed to “[s]pinal fixation systems . . . used in orthopedic surgery to align and/or fix a desired relationship between adjacent vertebral bodies.” Ex. 1103 ¶ 2. Figures 27C, reproduced below, illustrates the elements of Runco’s system pertinent to this challenge:

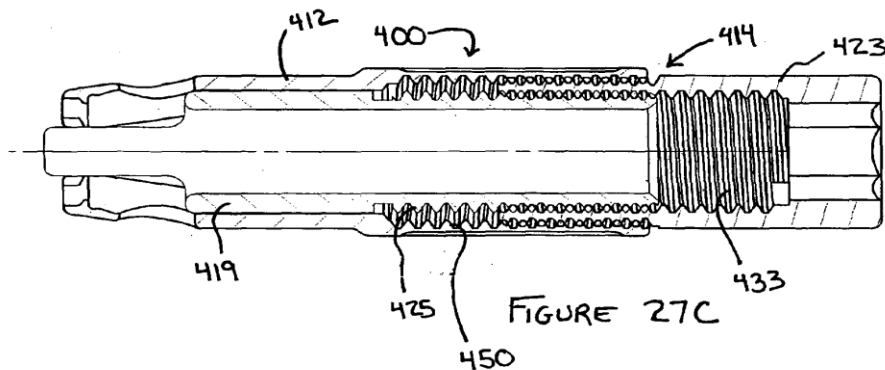


Figure 27C is a side view in cross section of Runco’s instrument. *Id.* ¶ 53. This figure illustrates rod adjusting tool 414, which includes “distal component 419 having a rod engaging surface 421 and a proximal component 423 connectable to and separable from the distal component 419.” *Id.* ¶ 104 (emphasis omitted). Runco explains that “[i]n operation, rotation of the proximal component 423 causes the distal component 419 to advance axially relative to the bone anchor engaging tool 412.” *Id.*

1. *Petitioner’s Challenge*

For this challenge, Petitioner relies upon the same assertions regarding Whipple (fig. 11A) discussed above in Part III.C. In particular, Petitioner asserts that the embodiment of Whipple’s distal end 64 shown in Figure 11A

corresponds to the claimed rod contact member. Pet. 26. Alternatively, Petitioner asserts that Runco discloses this limitation. *Id.* at 27. In support of this assertion, Petitioner contends that “Runco discloses a distal component 419 (i.e., the rod contact member) attached to a proximal component 423 (i.e., a rotatable member) by way of cooperating external and internal threads 425 and 433.” *Id.* at 28 (emphasis omitted).

Based on these contentions, Petitioner asserts that “[i]t would have been obvious to a person of ordinary skill in the art to attach the distal end 64 (i.e., the claimed rod contact member) shown in FIG. 11A of Whipple to the distal end of the tube 60 (i.e., the claimed rotatable member), as taught by Runco.” Pet. 28 (emphasis omitted). Petitioner explains that “[s]uch an arrangement would enable the distal end 64 . . . shown in FIG. 11A to remain proximate to (i.e., does not separate from) the distal-most end [of] the tube 60 . . . during axial advancement and retraction of the distal end 64 and the tube 60.” *Id.* at 28–29 (*citing* Ex. 1107 ¶ 81).

2. *Patent Owner’s Response*

Patent Owner contends that “[b]ecause Ground 1⁵ fails to invalidate independent Claim 16, Ground 2⁶ also fails to invalidate dependent Claim 22.” PO Resp. 37.

3. *Analysis*

Claim 22 depends from claim 16. Petitioner’s challenge of claim 16 based on Whipple (Fig. 11A) fails, as discussed above, because Petitioner has not shown that Whipple (Fig. 11A) discloses a rotatable member as required by claim 16. Through its dependency from claim 16, claim 22 also

⁵ Challenge based on anticipation by Whipple (Fig. 11A).

⁶ The instant challenge.

requires this rotatable member. Petitioner's challenge to claim 22 relies upon the same deficient showing with respect to the rotatable member as the challenge to claim 16 discussed above in Part III.C. Petitioner's analysis of the combined teachings of Whipple (Fig. 11A) and Runco does not cure this deficiency. In other words, the Petition does not rely on Runco to meet the limitation directed to a rotatable member. Rather, the Petition only relies on Runco's alleged teaching of a distal end attached to the rotatable member, and thus cannot cure this deficiency. *See* Pet. 26–29.

*4. Conclusion Regarding Combined Teachings of
Whipple (Fig. 11A) and Runco*

For the foregoing reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that claim 22 is unpatentable over Whipple (Fig. 11A) and Runco in accordance with 35 U.S.C. § 103(a).

*E. Anticipation of Claims 16, 18, 19, 21, and 22 by
Whipple (Fig. 11C)*

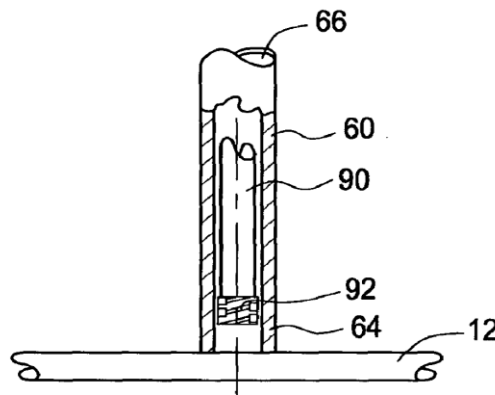
Above, we addressed Petitioner's contentions regarding Whipple (Fig. 11A). Petitioner also contends that claims 16, 18, 19, 21, and 22 are anticipated by Whipple (Fig. 11C). Pet. 29–44. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims would have been anticipated by Whipple (Fig. 11C). We begin our analysis with a brief overview of the embodiment shown in Whipple's Figure 11C. Next, we address the parties' contentions,

and then we discuss our reasoning. Our analysis focuses on independent claim 16, from which all other challenged claims depend.

1. *Fig. 11C of Whipple*

Whipple's Figure 11C illustrates an embodiment of distal end 64 for use with either of Whipple's instruments as shown in Figures 2 and 9 discussed above. As shown in Figure 11C, reproduced below, this embodiment which differs from the embodiment shown in Whipple's Figure 11A discussed in Part III.C, above.

FIG. 11C



Whipple's Figure 11C is a side view of an embodiment of the distal end of an adjustment mechanism for interacting with a spinal fixation element. Ex. 1102 ¶ 20. Whipple states that in this embodiment “distal end 64 of the tube 60 may directly contact the spinal fixation element 12 to effect adjustment of the spinal fixation element 12.” *Id.* ¶ 35.

2. *Petitioner's Challenge*

For this challenge, Petitioner's showing is similar to the challenge discussed above in Part III.C except for the assertions with respect to the rod contact member. *Compare* Pet. 11–21, *with id.* at 30–40. The main difference between this challenge and the prior challenge is that in this

challenge, Petitioner asserts that distal end 64 illustrated in Whipple's Figure 11C corresponds to the claimed rod contact member. *Id.* at 35–36.

3. *Patent Owner's Response*

Patent Owner contends that Whipple (Fig. 11C) does not disclose a rod contact member disposed at a distal end of the rotatable member as required by claim 16. PO Resp. 38. Noting that claim 16 requires “a separate ‘rod contact member positioned at a distal end of the rotatable member,’” Patent Owner argues that “[t]he rod contact member is a term that is specifically recited in the claims as a component of the rod reduction device.” *Id.* Therefore, according to Patent Owner, “these two elements [(i.e. the rod contact member and the rotatable member)] ‘logically cannot be one and the same.’” *Id.* (citing *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1398, 1404–05 (Fed. Cir. 1996)). Patent Owner explains that

the rotatable member and the rod contact member are movable relative to one another in that the rotatable member is configured to rotate about the longitudinal axis. Because the two elements are claimed separately and configured differently, the claims make it clear that the rotatable member and the rod contact member are “‘distinct component[s]’ of the patented invention.”

Id. at 31–32 (citing *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (quoting *Gaus v. Conair Corp.*, 363 F.3d 1284, 1288 (Fed. Cir. 2004)) (additional citations omitted).

4. *Analysis*

In accordance with our claim construction discussed above in Part III.A, claim 16 requires a rotatable member that is a *separate component* from the rod contact member. For the reasons discussed above in Part III.A, Petitioner's assertion that claim 16 does not require separate components is unconvincing. *See* Pet. Reply 14–16.

Whipple (Fig. 11C) does not disclose a rod contact member that is separate from the rotatable member. PO Resp. 38–39. Accordingly, Whipple’s distal end 64 (as illustrated in Figure 11C) does not satisfy claim 16’s “rod contact member.”

5. *Conclusion Regarding Whipple (Fig. 11C)*

For the foregoing reasons, we conclude that Petitioner fails to establish by a preponderance of the evidence that Whipple (Fig. 11C) anticipates claim 16 in accordance with § 102(e). For the same reasons, we conclude that Petitioner fails to establish that Whipple (Fig. 11C) anticipates claims 18, 19, 21, and 22, which depend from claim 16.

F. *Obviousness of Claims 16, 18, 19, 21, and 22
Based on Whipple (Fig. 11C) and Runco*

Petitioner asserts that claims 16, 18, 19, 21, and 22 are unpatentable under 35 U.S.C. § 103(a) based on Whipple (Fig. 11C) and Runco. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims would have been unpatentable over Whipple (Fig. 11C) and Runco. As overviews of Whipple and Runco are provided above, we begin our analysis by addressing Petitioner’s challenge. Next, we address Patent Owner’s response, and then we discuss our reasoning.

1. *Petitioner’s Challenge*

Petitioner asserts that Whipple (Fig. 11C) and Runco disclose or suggest all of the limitations of claims 16, 18, 19, 21, and 22. Pet. 44–56. For this challenge, Petitioner maps Whipple’s Figure 11C to the claims as discussed above in Section E, except Petitioner asserts that “it would have been obvious to a person of ordinary skill in the art to modify Whipple to

make its distal end 64 a separate . . . component that is attached to the tube 60 in view of the disclosure of Whipple in view of Runco.” *Id.* at 45. In support of this assertion, Petitioner explains that “[s]uch a modification would have been obvious to a person of ordinary skill in the art because it would result in an arrangement [that] would permit the distal end 64 . . . of Whipple to linearly or axially translate in a distal direction but remain rotationally fixed relative to the tube 60.” *Id.* at 48 (*citing* Ex. 1103 ¶ 1104⁷, Ex. 1107 ¶ 104⁸). According to Petitioner, “allowing the distal end 64 to remain rotationally fixed relative to the tube 60 (and thus the rod) . . . reduces friction that would be caused by the rotation of the distal end 64 against the rod during the reduction of the rod into the bone anchor.” *Id.*

2. Patent Owner’s Response

Patent Owner contends that Petitioner’s proposed modifications would render the embodiment shown in Whipple (Fig. 11C) inoperable. PO Resp. 44. In support of this contention, Patent Owner explains that “in Runco distal component 419 includes opposed projections 427A, 427B that seat within slots 429A, 429B formed by the space between jaw members 418A, 418B.” *Id.* at 45 (*citing* Ex. 1103 ¶ 104; Ex. 2021 ¶ 232). According to Patent Owner, “[t]hese projections being seated in the slots keep the distal

⁷ Exhibit 1103 has only 106 paragraphs. Paragraph 104 discusses axial advancement of distal component 419 without rotation. Thus, it appears that the citation to paragraph 1104 is a typographical error and the citation was meant to be to paragraph 104. Accordingly, we understand this citation to be to paragraph 104 of Exhibit 1103.

⁸ Paragraph 104 of Exhibit 1107 does not appear to be on point. Paragraph 136 addresses Petitioner’s position. Accordingly, although this is not an obvious typographical error, we understand this citation to be to paragraph 136 of Exhibit 1107.

component 419 from rotating when the proximal component 423 is rotated.” *Id.* Given this configuration, Patent Owner asserts that “[i]f Whipple was modified with Runco as asserted by Petitioner, distal end 64 of FIG. 11C would have opposed projections 427A, 427B to prevent rotation, but such a modification would make distal end 64 too large to enter, pass through, or exit coupling mechanism 100 of Whipple.” *Id.* at 46 (*citing* Ex. 2021 ¶ 234).

Patent Owner further asserts that “[t]he proposed combination would also be inoperable if Whipple was modified to include slots to receive the opposed projections required by Runco to prevent rotation,” because “[t]here is no feasible way of combining this design into Whipple.” PO Resp. 46–47 (*citing* Ex. 2021 ¶¶ 235–237). According to Patent Owner:

If arms 24, 50 of Whipple were to include slots 429A, 429B to receive opposed projections 427A, 427B of Runco, slots 429A, 429B must be at the same angle as arms 24, 50. Having slots 429A, 429 B at such an angle would make it impractical and impossible for a surgeon to be able to successfully position opposed projections 427A, 427B within the slots with one hand while simultaneously squeezing the handles such that the device grasps the bone anchor. This would also limit a surgeon’s visibility in surgery.

PO Resp. 51 (*quoting* Ex. 2021 ¶ 235). Patent Owner alternatively asserts that “if the slots were positioned higher in the Whipple device, for example near pivot axis 52, opposing projections 427A, 427B of Runco would block the closure of the device and force arms 24, 50 apart and/or resist the translation of tube 60, distal end 64, and the rod.” *Id.* at 48 (*quoting* Ex. 2021 ¶ 236). Thus, according to Patent Owner, “the combination of Whipple and Runco that would maintain the rod reduction disclosed by Runco would be rendered the proposed combination inoperable.” *Id.* (*quoting* Ex. 2021 ¶ 237).

3. *Analysis*

Patent Owner's assertions rest on arguments pertaining to the physical combinability of Runco's structure into Whipple's instrument. Specifically, these assertions rely on the contention that Runco's projections cannot be physically incorporated into Whipple's instrument. Such arguments are unpersuasive because "it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983) (citation omitted).

We, however, determine Petitioner's challenge suffers from a different deficiency. As discussed above, Petitioner asserts that the proposed modification would permit Whipple's distal end 64 to translate linearly or axially while remaining rotationally fixed. Pet. 48. According to Petitioner, such translation would reduce friction caused by distal end 64 rotating against the rod. Petitioner's analysis ignores the fact that Whipple already discloses embodiments where translation of distal end 64 occurs without rotation. *See* Ex. 1102 ¶ 39. As Whipple (Fig. 11C) is already capable of translating distal end 64 without rotation there is no reason for the proposed modification. Thus, Petitioner's reasoning for the proposed modification lacks rational underpinning.

5. *Conclusion Regarding Whipple (Fig. 11C) and Runco*

For these reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that Whipple (Fig. 11C) and Runco render claim 16 unpatentable in accordance with 35 U.S.C. § 103(a). For the same reasons, we conclude that Petitioner fails to establish that Whipple (Fig.

11C) and Runco render claims 18, 19, 21, and 22, which depend from claim 16, unpatentable in accordance with § 103(a).

G. Anticipation of Claims 16, 18, 19, 21, and 22 by Varieur

Petitioner contends that claims 16, 18, 19, 21, and 22 are anticipated by Varieur. Pet. 57–68. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims would have been anticipated by Varieur. We begin our analysis with a brief overview of this reference. Next, we address the parties’ contentions, and then we discuss our reasoning. Our analysis focuses on independent claim 16, from which all other challenged claims depend.

1. Varieur

Varieur is directed to an instrument for engaging a bone implant. Ex. 1104 ¶ 6. This instrument is shown in Figure 4 illustrated below:

FIG. 4

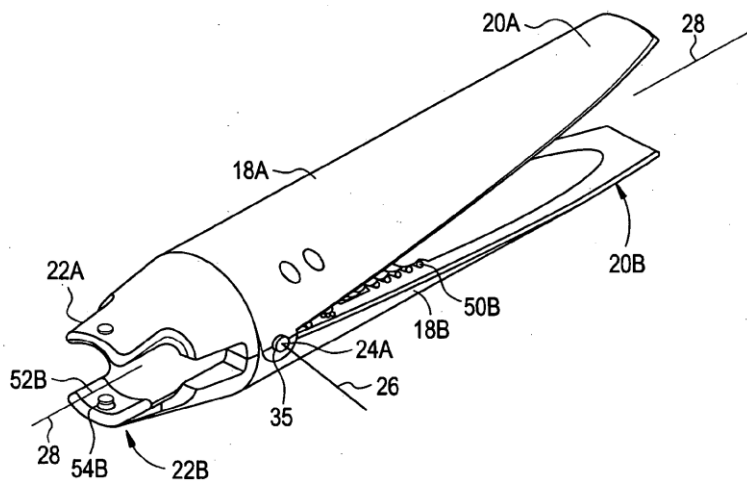
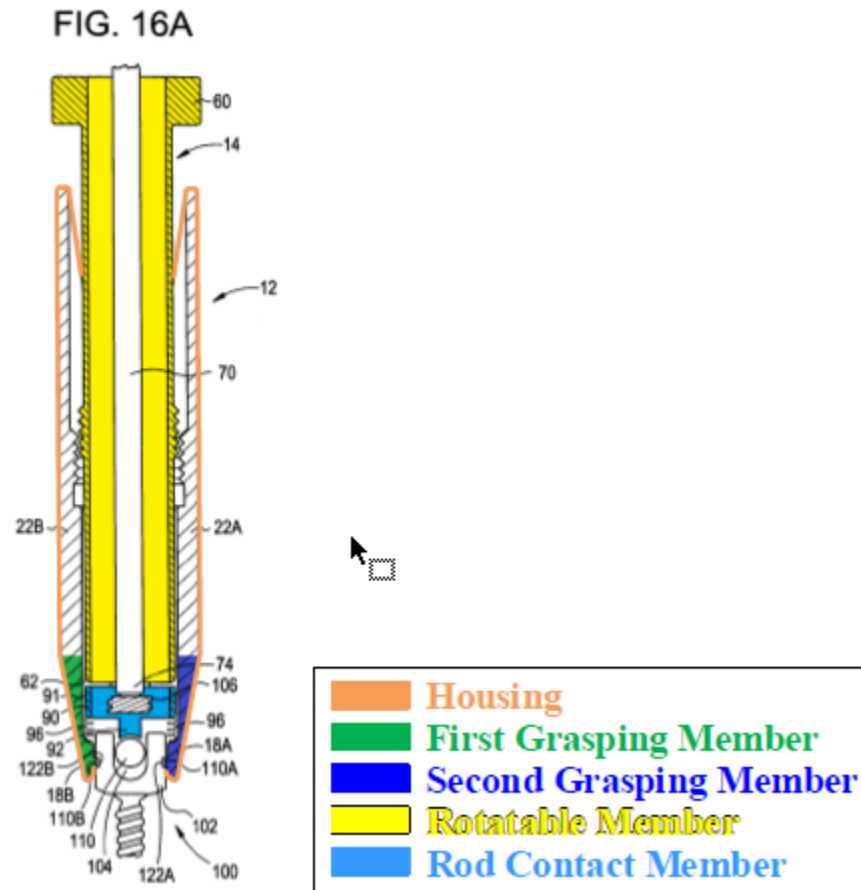


Figure 4 is a perspective view of the bone anchor engaging tool. Ex. 1104 ¶ 12. Varieur discloses bone engagement tool 12 including a first jaw member 18A and a second jaw member 18B cooperating to engage an implant such as a bone anchor. *Id.* ¶ 32. First jaw member 18A and second jaw member 18B include respective proximal ends 20A, B and distal ends 22A, B. *Id.* The jaw members 18A, B are pivotally connected together at pivot points 24A, B that are aligned along a pivot axis 26. *Id.* ¶ 33. Pivot axis 26 is oriented generally perpendicular to the longitudinal axis 28 of bone anchor engaging tool 12 such that jaw members 18A, B rotate about pivot axis 26. *Id.*

Bone engagement tool 12 includes a biasing mechanism coupled to jaw members 18A, B to bias the distal ends 22A, B to the approximately closed position. Ex. 1104 ¶ 35. This biasing mechanism can take the form of one or more springs, such as coil springs or leaf springs, positioned between jaw members 18A, B. *Id.* Jaw members 18A, B are spaced apart to form an opening therebetween that is sized and shaped to facilitate delivery of an implant by allowing a bone anchor or rod adjusting tool 14 to pass through the opening. *Id.* ¶ 36.

2. *Petitioner's Challenge*

Petitioner maps elements from Varieur to each limitation of claims 16, 18, 19, 21, and 22. Pet. 57–71. In particular, Petitioner submits that Varieur discloses a housing formed by first and second jaw members 18A, B. Pet. 58. Petitioner relies on annotated Figure 16A, reproduced below, to illustrate this position:



Annotated Figure 16A is a side elevational view in cross-section of the distal end of an embodiment of the instrument for adjusting a spinal rod relative to a bone anchor. Ex. 1104 ¶ 24.

3. Patent Owner's Response

Among other contentions, Patent Owner contends that Varieur fails to disclose a housing. PO Resp. 54. In support of this contention, Patent Owner argues that “[a] POSITA reading Varieur would understand jaw members 18A, 18B in FIG. 5 and the analogous portions of FIG. 16A are not fixed and, thus, not the claimed ‘housing.’” *Id.* at 55 (citing Ex. 2021 ¶ 256). Patent Owner explains that “[t]hese structures must move to allow for compression, which allows the distal end to open to be placed onto a bone anchor.” *Id.* (citing PO Resp. § IV(E)(2); Ex. 1104 ¶ 33; Ex. 2021 ¶¶ 246–

247, 256). According to Patent Owner “[i]f the proximal ends were fixed then the devices could not be placed onto a bone anchor, which renders them inoperable.” *Id.*

4. *Analysis*

As discussed above, for this proceeding, the claim term “housing” has been defined as “the fixed portion of the rod reducing device that defines the body through passage.” *Supra* Part III.A. Petitioner does not contest this definition. *See* Pet. Reply 5 (asserting that the Board correctly construed “extending through the housing” as “extending through the fixed portion of the rod reducing device that defines the body through passage”).

We agree with Patent Owner that one skilled in the art would not have considered Varieur’s first and second jaw members 18A, B to be fixed, because Varieur’s components are analogous to a clothespin in that a user compresses one side to open the other. *See* PO Resp. 55. Accordingly, Varieur’s first and second jaw members 18A, B are not a housing in accordance with our construction of that claim term.

5. *Conclusion Regarding Varieur*

For the foregoing reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that Varieur anticipates claim 16 in accordance with 35 U.S.C. § 102(b). For the same reasons, we conclude that Petitioner fails to establish that Varieur anticipates claims 18, 19, 21, and 22, which depend from claim 16, in accordance with § 102(b).

H. *Obviousness of Claims 16, 18, 19, 21, and 22 Based on Varieur and Runco*

Petitioner contends that claim 22 is unpatentable over Varieur and Runco. Pet. 69–71. Having now considered the evidence in the complete

record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that this claim would have been unpatentable over Varieur and Runco. As we have provided a brief overview of Varieur and Runco above, we begin by addressing the parties' contentions and then we discuss our reasoning.

1. Petitioner's Challenge

Petitioner asserts that Varieur and Runco disclose or suggest all of the limitations of claim 22. Pet. 69–71. For this challenge, Petitioner maps Varieur to claim 22 as discussed above in Section G, except Petitioner admits that “Varieur, however, does not explicitly disclose that the rod engaging member 90 (i.e., the claimed rod contact member) is attached to the distal end 62 of the rod adjusting tool 14 (i.e., the claimed rotatable member).” *Id.* at 70 (emphasis omitted). To cure this deficiency in Varieur, Petitioner asserts that “Runco discloses a rod contact member attached to the distal end of a rotatable member.” *Id.*

2. Patent Owner's Response

Patent Owner argues that “[b]ecause Ground 5⁹ fails to invalidate independent Claim 16, Ground 6¹⁰ also fails to invalidate dependent Claim 22.” PO Resp. 58.

3. Analysis

Claim 22 depends from claim 16. Petitioner's challenge of claim 16, which is based on Varieur, fails because Petitioner has not shown that Varieur discloses a housing as required by claim 16. Claim 22 also requires this housing because it depends from claim 16. Petitioner's challenge to

⁹ Challenge based on Varieur.

¹⁰ The instant challenge.

claim 22 relies upon the same deficient showing with respect to the housing as the challenge to claim 16 discussed above in Part III.G. Petitioner's instant challenge does not cure this deficiency. In other words, the Petition does not rely on Runco to meet the limitation directed to a housing. Rather, the Petition only relies on Runco's alleged teaching of a distal end attached to the rotatable member and thus cannot cure this deficiency. *See* Pet. 69–71.

4. *Conclusion Regarding Combined Teachings of
Varieur and Runco*

For the foregoing reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that claim 22 is unpatentable over Varieur and Runco in accordance with 35 U.S.C. § 103(a).

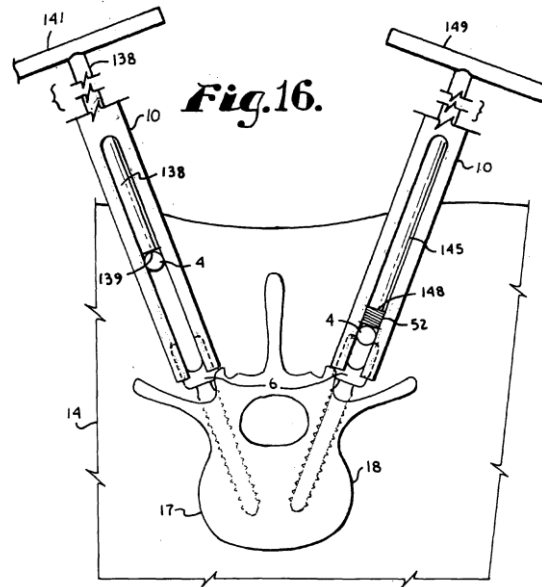
I. *Anticipation of Claims 16, 18, 19, 21, and 22 by Jackson*

Petitioner contends that claims 16, 18, 19, 21, and 22 are anticipated by Jackson. Pet. 71–83. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that these claims would have been anticipated by Jackson. We begin our analysis with a brief overview of this reference. Next, we address the parties' contentions, and then we discuss our reasoning. Our analysis focuses on independent claim 16, from which all other challenged claims depend.

1. *Jackson*

Jackson is directed to a set of tools for percutaneously implanting a spinal rod in a patient. Ex. 1105 ¶ 4. Jackson's tool set 1 includes a pair of end guide tools 9 and a pair of intermediate guide tools 10 which are used during implantation of bone screws 6 and rod 4. *Id.* ¶¶ 36, 59. Jackson's

bone screws 6 include spaced bone screw arms 74 and 75. *Id.* ¶ 43. Bone screws 6 also include closure tops 52, as shown in Figure 16 reproduced below:



Id. ¶ 39. Figure 16 is a “partial and generally schematic cross sectional view of the spine showing rods being implanted on opposite sides of the spine and with the rod on the left in an early stage of implanting while the rod on the right is in a later stage of implanting.” *Id.* ¶ 25. Closure tops (alternatively referred to in Jackson as enclosures) 52 close the space between bone screw arms 74 and 75 to secure the rod 4 in the channel 67. *Id.* ¶ 51. Each closure top 52 has a cylindrical body 123 that has a helically wound mating guide and advancement structure 125 which aligns with mating structures in bone screws 6 to drive rod 4 into each bone screw 6. *See id.*

2. *Petitioner’s Challenge*

Petitioner maps elements from Jackson to each limitation of claims 16, 18, 19, 21, and 22. Pet. 71–83. In particular, Petitioner asserts that Jackson’s closure top 52 corresponds to the claimed rod contact member.

Pet. 77. In support of this assertion, Petitioner directs our attention to Figure 17 reproduced below:

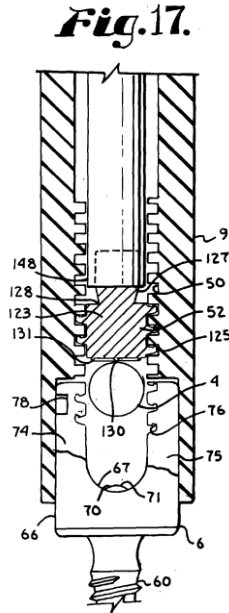


Figure 17 is a cross-sectional view of an end guide tool shown during installation of the rod and a closure top in the bone screw. Ex. 1104 ¶ 26. According to Petitioner, closure top 52 is driven downward against rod 4. Pet. 77.

In reply to Patent Owner’s argument discussed in the next section, Petitioner asserts that “claim 16 does not recite that the claimed ‘rod contact member’ must remain part of an instrument or that it must not be ‘implantable.’” Pet. Reply 29.

3. Patent Owner’s Response

Among other contentions, Patent Owner argues that Jackson fails to disclose a rod contact member as required by claim 16. See PO Resp. 70. Noting that Jackson’s closure top 52 is part of the implant, Patent Owner argues that “[a] POSITA would understand that an implant is not a part of

the rod reducing device” and that part of the implant cannot constitute the claimed rod contact member. *Id.* (citing Ex. 2021 ¶ 296).

4. *Analysis*

As discussed above, Jackson is directed to tool kit 1 for use in attaching rod 4 to bone screws 6. Jackson clearly distinguishes between the parts of the tool kit and the parts of the bone screws (i.e. implants). *Compare, e.g.,* Ex. 1104 ¶¶ 37–40 (describing different guide tools 9, 10 and their components), *with id.* at ¶¶ 42–43 (describing the components of bone screws 6). We particularly note that closure tops 52 are included with the components of bone screws 6. Accordingly, we credit the testimony of Mr. Drewry that “Jackson makes it clear that a portion of closure top 52 remains in the body after rod reduction” such that “a person of ordinary skill in the art would not have understood Jackson to disclose ‘a rod contact member positioned at a distal end of the rotatable member,’ as recited in Claim 16.” Ex. 2021 ¶¶ 295, 297.

5. *Conclusion Regarding Jackson*

For these reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that Jackson anticipates claim 16 in accordance with 35 U.S.C. § 102(b). For the same reasons, we conclude that Petitioner fails to establish that Jackson anticipates claims 18, 19, 21, and 22, which depend from claim 16, in accordance with § 102(b).

J. Obviousness of Claim 18 Based on Jackson and Trudeau

Petitioner contends that claim 18 is unpatentable over Jackson and Trudeau. Pet. 83–86. Having now considered the evidence in the complete record established during trial, we are not persuaded that Petitioner has demonstrated by a preponderance of the evidence that this claim would have

been unpatentable over Jackson and Trudeau. As we have provided a brief overview of Jackson above, we begin by providing a brief overview of Trudeau. Next we address the parties' contentions and then we discuss our reasoning.

1. Trudeau

Trudeau is directed to “an apparatus and method for securing a spinal rod along the spine and, more particularly, to an apparatus and method for securing the spinal rod to extend through a coupling device including an anchor member.” Ex. 1106 ¶ 1. Trudeau's apparatus includes a clamp subassembly 90 including opposed jaws 60, 62 as illustrated in Figure 4b reproduced below:

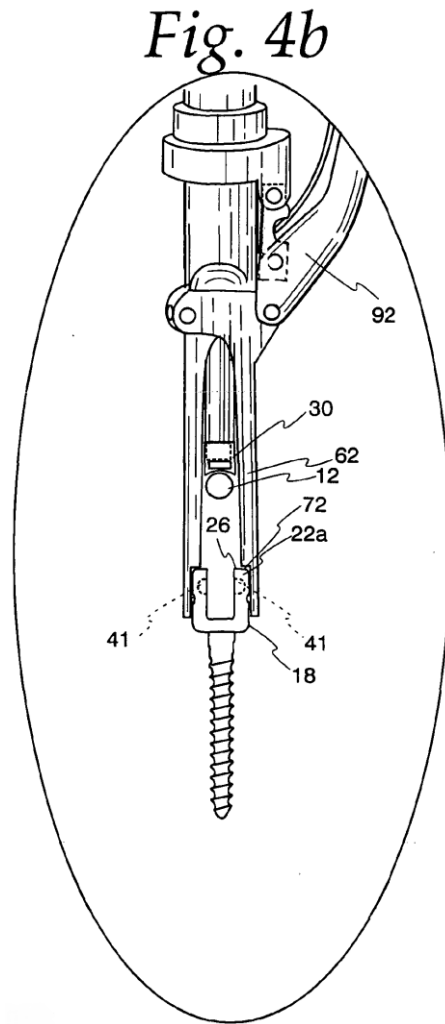


Figure 4b is a perspective view of the clamping subassembly 90 including jaws 60, 62. Ex. 1106 ¶ 11. Jaws 60, 62 each include tooth 38 to attach jaws 60, 62 to yoke 18 of pedicle screw fixture 16. *Id.* ¶ 48.

2. *Petitioner's Challenge*

Petitioner asserts that Jackson and Trudeau disclose or suggest all of the limitations of claim 18. Pet. 83–86. For this challenge, Petitioner maps Jackson to claim 18 as discussed above in Section I, except Petitioner submits that “[s]hould the Board . . . conclude that claim 18 requires that both the claimed first grasping member and the claimed second grasping

member each include at least one grasping feature, such feature is disclosed by Trudeau.” Pet. 84.

3. *Patent Owner’s Response*

Patent Owner contends that “[b]ecause Ground 7¹¹ fails to invalidate independent Claim 16 for the reasons listed above, Ground 8¹² also fails to invalidate dependent Claim 18.” Prelim. Resp. 71.

4. *Analysis*

Petitioner’s challenge of claim 16 (from which claim 18 depends) based on Jackson fails because Petitioner has not shown that Jackson discloses a rod contact member as required by claim 16. Claim 18 also requires this member because it depends from claim 16. Petitioner’s challenge to claim 18 relies upon the same deficient showing with respect to the rod contact member as the challenge to claim 16 discussed above in Part III.I. Petitioner’s instant challenge does not cure this deficiency. In other words, the Petition does not rely on Trudeau to meet the limitation directed to a housing. Rather, the Petition only relies on Trudeau’s alleged teaching of a distal end attached to the rotatable member and thus cannot cure Jackson’s deficiency. *See* Pet. 83–86.

5. *Conclusion Regarding Combined Teachings of Jackson and Trudeau*

For the foregoing reasons, we conclude that Petitioner fails to establish by a preponderance of evidence that claim 18 is unpatentable over Jackson and Trudeau in accordance with 35 U.S.C. § 103(a).

¹¹ Challenge based on anticipation of claims 16, 18, 19, 21, and 22 by Jackson.

¹² The instant challenge.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner has not shown by a preponderance of evidence that any of claims 16, 18, 19, 21, and 22 of the '814 patent are unpatentable. Specifically, Petitioner has not shown that (1) claims 16, 18, 19, 21, and 22 of the '816 patent are anticipated by Whipple (Fig. 11A), (2) claim 22 is unpatentable over Whipple (Fig. 11A) and Runco, (3) claims 16, 18, 19, 21, and 22 are anticipated by Whipple (Fig. 11C), (4) claims 16, 18, 19, 21, and 22 are unpatentable over Whipple (Fig. 11C) and Runco, (5) claims 16, 18, 19, 21, and 22 are anticipated by Varieur, (6) claim 22 is unpatentable over Varieur and Runco, (7) claims 16, 18, 19, 21, and 22 are anticipated by Jackson, and (8) claim 18 is unpatentable over Jackson and Trudeau.

V. MOTION TO EXPUNGE

In addition, we grant Patent Owner's motion to expunge its originally filed Patent Owner's Sur-Reply and to replace it with the later filed version.

VI. ORDER

In consideration of the foregoing, it is hereby

ORDERED that on the record before us, Petitioner has not shown by a preponderance of the evidence that claims 16, 18, 19, 21, and 22 of the '814 patent are unpatentable.

FURTHER ORDERED that Patent Owner's Motion to Expunge (Paper 32) is granted.

FURTHER ORDERED that this is a Final Written Decision. Parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. §90.2.

IPR2018-00521
Patent 9,532,816 B2

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