

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
filed in the U.S. District Court Eastern District of Michigan on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 19-CV-10656	DATE FILED 3/5/2019	U.S. DISTRICT COURT Eastern District of Michigan
PLAINTIFF Acantha LLC		DEFENDANT NuVasive, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6,261,291	7/17/2001	Acantha LLC
2 RE43,008	12/6/2011	Acantha LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK David J. Weaver	(BY) DEPUTY CLERK S. Schoenherr	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DEPUY SYNTHES SALES, INC,
Petitioner,

v.

ACANTHA LLC,
Patent Owner.

Case IPR2016-00334
Patent RE43,008 E

Before MEREDITH C. PETRAVICK, MICHAEL J. FITZPATRICK, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION
Denying *Inter Partes* Review
35 U.S.C. § 314; 37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, DePuy Synthes Sales, Inc., filed a Petition to institute an *inter partes* review of claims 59–91 of U.S. Patent No. RE43,008 E (Ex. 1001, “the ’008 patent”) pursuant to 35 U.S.C. § 311(a). Paper 1 (“Pet.”). Patent Owner, Acantha, LLC, filed a Preliminary Response pursuant to 35 U.S.C. § 313. Paper 10 (“Prelim. Resp.”).¹

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Upon consideration of the Petition, and for the reasons explained below, we determine that there is not a reasonable likelihood that Petitioner would prevail with respect to any challenged claim. *See* 35 U.S.C. § 314(a). Accordingly, we deny the Petition.

A. Related Matters

The ’008 patent issued December 6, 2011, from an application filed July 15, 2003. The ’008 patent is a reissue of U.S. Patent No. 6,261,291 B1 (“the ’291 patent”), which had issued July 17, 2001, from an application filed July 8, 1999. The ’008 patent has 105 claims, with claims 1–28 having issued in the original ’291 patent and claims 29–105 being added during reissue.

¹ In the body of the Preliminary Response, Patent Owner refers to itself as Acantha, *Inc.* Prelim. Resp. 1. This appears to be a typographical error, as the Preliminary Response is captioned with Acantha, LLC, as the Patent Owner and was filed by attorneys representing Acantha, LLC. *Id.* at 57. Also, in its mandatory notices, Patent Owner identifies itself as Acantha, LLC. *See* Papers 7, 9.

The parties identify *Acantha LLC v. DePuy Synthes Sales, Inc.*, Civil Action No. 1:15-cv-01257 (E.D. Wis.), as a related judicial matter. Pet. 1; Paper 7, 2. Additionally, Petitioner has filed two separate petitions for *inter partes* review challenging other claims of the '008 patent. *See* Cases IPR2016-00329; IPR2016-00333.

B. The '008 Patent

The '008 patent relates to orthopedic implant assemblies for joining bone segments and methods of using such assemblies. Ex. 1001, 1:11–13. The specification explains that “[a] variety of medical conditions may necessitate the joining of bone segments together, as for example, in the treatment of broken bones, spinal disorders, or the fusion of vertebrae following the removal of a spinal disk.” *Id.* at 1:14–17. The assemblies may be rods or plates that are attached to the bone with screws. *Id.* at 1:17–21. “However, one disadvantage has been the tendency of the implants to loosen or detach from the bone over time.” *Id.* at 1:24–25.

The '008 patent describes an improved implant assembly designed to minimize detachment from bone. Generally, the implant assembly includes “a stabilizing element [e.g., a plate], a securing element [e.g., a screw] which attaches the stabilizing element to the patient’s bone, and a stopping member in the stabilizing element which defines at least in part a passageway and which inhibits or prevents the securing element from loosening or backing out of the bone.” *Id.* at 1:32–38.

Figure 1 of the '008 patent is reproduced below.

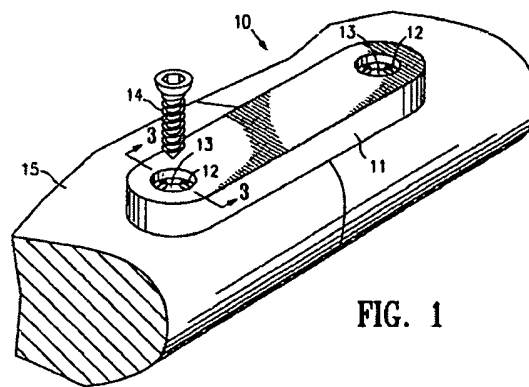


FIG. 1

Figure 1 illustrates orthopedic implant assembly 10 for attachment to a patient's bone 15. *Id.* at 4:16–20. The assembly includes stabilizing element 11 having bores 13, each of which may receive securing element 14 (here, a screw). *Id.*

Figures 2 and 3 are reproduced below.

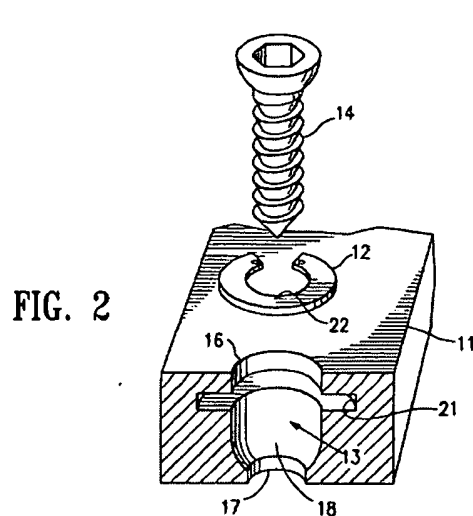


FIG. 2

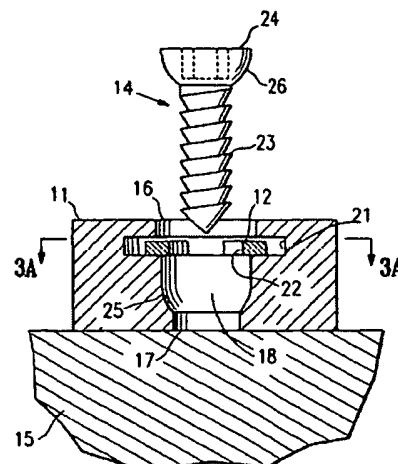


FIG. 3

Figures 2 and 3 illustrate exploded and sectional views, respectively, of a portion of the implant assembly of Figure 1. *Id.* at 4:34–37. Bore 13 includes first (i.e., anterior) opening 16, second (i.e., posterior) opening 17, and transverse passageway 18 extending between the openings. *Id.* at 4:26–

31. The bore also includes groove 21 that receives and retains annular collar 12. *Id.* at 4:31–34. The collar is c-shaped and defines passageway 22, as more easily seen in Figure 2. *See id.* at Fig. 2, refs. 12, 22.

The screw (securing element 14) has elongated body 23 and integral head 24. *Id.* at 4:45–48. The head has a flat anterior surface (not labelled) and curved posterior surface 26. *Id.* at 4:55–58. In a “preferred embodiment,” the collar is positioned in the groove before the screw is advanced through the transverse passageway of the bore. *Id.* at 2:14–17. In such an embodiment, the screw is posteriorly advanced through the collar 12, such that the curved posterior surface of the head applies a radially expanding force against an inner surface of the collar to expand the inner diameter of the collar. *Id.* at 4:67–5:6, Fig. 4. As the head passes beyond the collar, it enters posterior section 25 of passageway 18, and the collar returns to the unexpanded configuration. *Id.* at 5:13–19, Fig. 5. The flat anterior surface of the head has a diameter larger than that of the unexpanded inner diameter of the collar. *Id.* at 5:19–22, Fig. 5. “Thus, the anterior surface of the head will butt up against the posterior surface of the collar without expanding the collar, to prevent the securing element from being anteriorly displaced” (i.e., backing out of the bone). *Id.* at 5:23–27.

Posterior section 25, which ultimately houses the head of the screw, is longer than the head, thus allowing the head to be displaceable longitudinally (i.e., anterior-posterior) within the posterior section of the transverse passageway. *Id.* at 5:43–48, Fig. 5. Also, the elongated body of the screw has a smaller diameter than that of the second (i.e., posterior) opening 17 of the bore, thus allowing the body to be displaceable side-to-

side (i.e., medial-lateral) within the second opening 17. *Id.* at 5:48–52, Fig. 5. As a result of these tolerances, the screw is angularly displaceable, as illustrated in FIG. 6. Thus, the '008 patent discloses that the securing member (screw) may be inserted into the bone at angles other than strictly perpendicular. *Compare id.* at Fig. 5, with Fig. 6.

C. The Challenged Claims

Petitioner challenges claims 59–91. Pet. 1. Of these, claim 59 is independent. It is illustrative and reproduced below.

59. An orthopedic implant assembly, comprising:
- a) an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
 - b) an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and
 - c) a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral portion into the posterior bore portion, the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion

of the securing member within the posterior bore portion of the attachment member.

D. Asserted Prior Art

The '008 patent issued December 6, 2011, from an application filed July 15, 2003. The '008 patent is a reissue of the '291 patent, which had issued July 17, 2001, from an application filed July 8, 1999.

The Petition asserts the following references as prior art to the claims of the '008 patent:

- (1) Errico,² pursuant to 35 U.S.C. § 102(a) and (e)(2);³
- (2) Koshino,⁴ pursuant to 35 U.S.C. § 102(a) and (e)(2); and
- (3) Campbell,⁵ pursuant to 35 U.S.C. § 102(e)(2).

Pet. 5.

E. Asserted Grounds

The Petition identifies the following asserted ground of unpatentability:

² U.S. Patent No. 5,876,402, filed Mar. 29, 1996, issued March 2, 1999. Ex. 1003.

³ The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the '008 patent issued was filed before that date, our citations to 35 U.S.C. §§ 102 and 103 are to their pre-AIA version.

⁴ U.S. Patent No. 5,879,389, filed Apr. 1, 1996, issued March 9, 1999. Ex. 1004.

⁵ U.S. Patent No. 6,258,089 B1, filed May 19, 1999, issued July 10, 2001. Ex. 1005.

References	Basis	Claims Challenged
Errico and Koshino or Campbell	§ 103(a)	59–91

Pet. 6.

II. ANALYSIS

A. Claim Construction

“A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b). Pursuant to that standard, the claim language should be read in light of the specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.”) (internal quotation marks omitted). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Neither party proposes an explicit construction for any term that requires construction for purposes of this Decision. One claim term, however, was expressly defined by applicants. In that regard, the '008 patent states: “The term *integral* should be understood to mean the securing element is a one-piece unit, with the head secured to the body so that there is no relative movement between the head and the body.” Ex. 1001, 2:9–12 (emphasis added). Claim 59 recites “an elongated securing element having

an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension.” We interpret the term “integral” in claim 59 as defined in the specification.

B. Obviousness in View of Errico and Koshino or Campbell

Petitioner contends that claims 59–91 would have been obvious over Errico and Koshino or Campbell. Pet. 6. In assessing obviousness, “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Additionally, secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18.

1. *Errico (Ex. 1003)*

Errico discloses an implant assembly “for use in stabilizing and immobilizing vertebral bodies” and which allows for “polyaxial” (multiple angled) placement and locking of screws. Ex. 1003, 4:12–14.

Figure 6 of Errico is reproduced below.

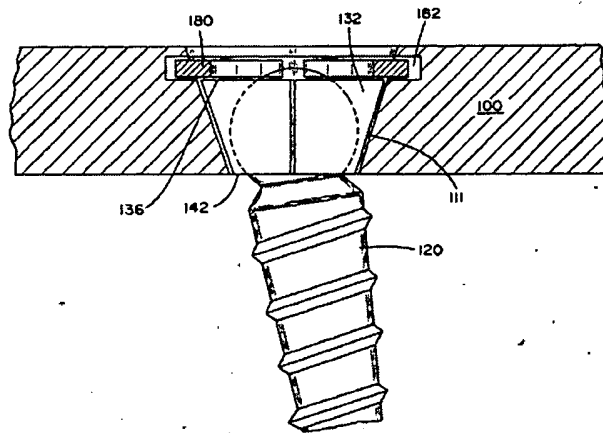


FIG.6

Figure 6 illustrates the implant assembly as fully assembled (except that it omits the bone to which the assembly would be attached). *Id.* at 5:24–25. The assembly includes plate 100 having an upper (anterior) surface and lower (posterior) surface. *Id.* at 5:24–25. With reference to Figure 3a, the plate includes multiple holes 110, 112, extending between the upper and lower surfaces. *Id.* at Fig. 3a. One such hole is shown in Figure 6 above; it is shaped roughly akin to that of an upside-down lampshade. The interior of the hole includes a groove or annular recess 182 within which is positioned c-shaped snap ring 180. Errico’s snap ring 180 can function precisely in the same manner as that of the collar 12 in the ’008 patent. *Id.* at 6:6–12. However, Errico’s screw 120 lacks an integral head that deflects the snap ring outwardly when the screw is advanced posteriorly into the hole, as conceded by Petitioner and as applicants argued during prosecution. Pet. 14; Ex. 1002, 122–23, 555. Instead, the snap ring 180 is deflected by a different component of the Errico assembly—coupling element 132—which is advanced posteriorly with the screw during implantation. *Id.* at 7:41–55.

Errico's screw consists of head portion 122, neck 124, and shaft 126.

Ex. 1003, 6:16–17; *see also* Fig. 4 (illustrating the screw in isolation). The head is semi-spherical in shape, which Errico states requires a section of a sphere that is greater in extent than a hemisphere and which exhibits an external contour that is equidistant from a center point of the head. *Id.* at 6:26–31.

The head is mounted within the coupling element, which has “interior semi-spherical volume 140 which is ideally suited for holding the head portion 122 of the screw 120, and permitting the screw to rotate [(i.e., angulate) prior to the screw being fully advanced into bone] through a range of angles.” *Id.* at 7:8–11, Fig. 5, ref. 140. The coupling element has an outer surface 134 corresponding to that of holes in the plate (i.e., roughly that of an upside-down lampshade). *Id.* at 6:58–67. However, the outer surface is not circumferentially continuous. *Id.* at 7:25–30. It includes axial slot 149, which allows the coupling element to be expanded to facilitate insertion of the head portion of the screw into the semi-spherical interior volume. *Id.* at 7:30–34, Fig. 5. The axial slot also allows the coupling element to be contracted when inserted into a hole of the plate. *Id.* This contraction “crush[es] against the head 122 upon the application of an inwardly directed radial force,” thereby locking the angle with which the screw has been advanced. *Id.*; *id.* at 5:5–7.

2. *Koshino (Ex. 1004)*

Koshino discloses an implant for hard tissue (e.g., bone) designed to be attached to such tissue in a way that avoids subsequent loosening of the implant. Ex. 1004 at 1:5–13, 1:22, 3:23–25. The implant is attached to hard tissue with one or more “fixation screws.” *Id.* at 4:52–55.

Figure 6 of Koshino is reproduced below.

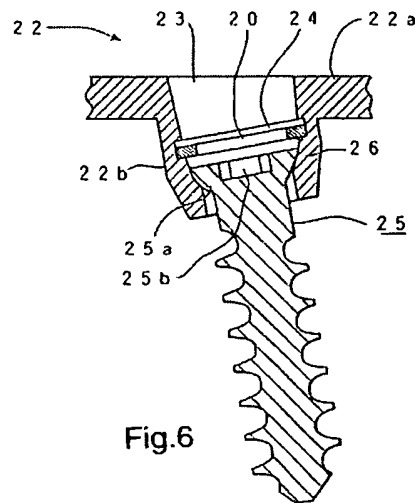


Figure 6 illustrates fixation screw 25 inserted through hole 23 of plate 22a of implant 22. *Id.* at 12:37–41, Fig. 6. The hole extends through projection 22b of the plate and is angled with respect to the plate. *Id.* Thus, the screw likewise is angled with respect to the plate. *Id.* at Fig. 6. The screw has head 25a that has a flat anterior surface and curved posterior surface, from which extends the threaded body of the screw.

3. *Campbell* (Ex. 1005)

Campbell discloses a cervical plate and fixation system, designed to be attached to the spine with fixation screws in a manner that inhibits loosening of the device after implantation. Ex. 1005, 1:12–15; 2:10–26. Figure 20 of Campbell is reproduced below.

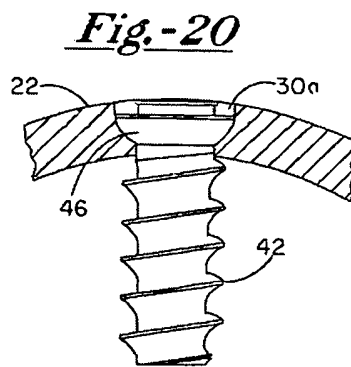


Figure 20 illustrates a sectional view of a portion of cervical plate 22 with “fastener” (screw) inserted. *Id.* at 4:22–26. The screw has elongated shank 42 with threads and “enlarged head 46 with a spherical profile 48 sized to allow the head to nest within spherical section 34 of the aperture.” *Id.* at 5:45–51 (spherical section 34 not labelled in Fig. 20).

4. Petitioner’s Application of the Art to the Challenged Claims

Petitioner concedes that Errico alone does not disclose the subject matter of the challenged claims, stating:

The *only* difference between the challenged claims of the ’008 patent and Errico is that the claimed invention of the ’008 patent uses the head of the screw itself to expand the stopping member and provide a surface to prevent the screw from backing out, whereas Errico includes an extra part – a coupling element that surrounds the screw head – to perform these same functions.

Pet. 14.

Citing declaration testimony of Bret A. Ferree, M.D., the Petition argues that using a screw head from either Koshino or Campbell instead of Errico’s coupling element “is nothing more than an obvious choice in design, and one that would have been readily contemplated and implemented

by a POSA at the time of the invention, for both mechanical and clinical reasons, with a reasonable expectation of success.” *Id.* (citing Ex. 1006 ¶¶ 38–39). The cited testimony, however, is not persuasive. In paragraph 38, Dr. Ferree simply testifies to the ultimate conclusion of law that the claims are obvious. Ex. 1006 ¶ 38. And paragraph 39 is virtually identical to the just-quoted conclusory argument set forth in the Petition. *Id.* at ¶ 39.

The Petition and declaration do offer additional arguments and testimony to support the proposed modification but they too are insufficient. First, the Petition states, with support from Dr. Ferree, that “it was known in the orthopedic industry at the time of the filing of the ’008 patent that it was desirable for orthopedic implants to be limited to the minimum number of components necessary” due to “cost of manufacturing, inventory, ease of use, crevice corrosion, and simplicity of surgery.” Pet. 14 (citing Ex. 1006 ¶ 40). Limiting the number of components may be desirable, if the reduction can be achieved without compromising design goals. Yet, Errico expressly teaches a more complex structure because of the benefits it provides. Those benefits include that the screw can be angulated in countless directions to provide a surgeon flexibility during implantation (Ex. 1003, 7:22–24), that the screw is locked into whatever angle ultimately is chosen by the “crush locking” of the interior semi-spherical volume of the coupling element against the semi-spherical head (*id.* at 5:5–7), that the coupling element fully mates with the hole in the plate regardless of the angle of the screw (*id.* at 6:62–67), and that the coupling element is secured just beneath (posterior to) the snap ring (*id.* at 7:51–55, Fig. 6).

The Petition next states, with support from Dr. Ferree, that a person of

ordinary skill in the art “would understand that it is critical for the bone plate to have as thin a profile as possible” but that “[t]he coupling element in Errico . . . requires more space in the bore, and thus necessarily increases the profile (thickness) of the plate.” Pet. 15 (citing Ex. 1006 ¶¶ 42–43).

However, neither the Petition nor Dr. Ferree cites evidence that using a coupling element requires more anterior-posterior space in the bore than using a screw head alone. See Pet. 15; Ex. 1006 ¶¶ 42–43. In fact, the record evidence tends to show the opposite. In Koshino, as well as in the ’008 patent, a substantial gap exists above the screw head. See Ex. 1004, Fig. 6; Ex. 1001, Figs. 5–6.⁶ As discussed above, the ’008 patent describes this gap as desirable because it, along with transverse tolerance, accommodates angulation of the screw. Ex. 1001, 5:43–52.

Petitioner has not shown an apparent reason to combine the relied upon teachings of Errico and Koshino or Campbell in the manner set forth in the challenged claims. See *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (requiring, for obviousness, “an apparent reason to combine the known elements in the fashion claimed by the patent at issue”).

Additionally, Errico teaches away from the proposed combination because such a combination would render Errico inoperable for its intended purpose. See *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1381 (Fed. Cir. 2007) (“Additionally, a reference may teach away from a use when that use would render the result inoperable.”). Errico seeks to provide an

⁶ Campbell also shows a gap above the screw head, although it appears to be relatively smaller than the gap above the screw head in Koshino or the ’008 patent. See Ex. 1005, Fig. 22.

implantable plate “having a polyaxial coupling of the screw to the plate, whereby a single plate is compatible with a wide range of screw-in angles” and “which has a simple and effective locking mechanism for *locking the bone screw to the plate.*” Ex. 1003, 3:59–67 (emphasis added).

Modifying Errico as Petitioner proposes would destroy at least one of these features. In Errico, the coupling element facilitates angulation of the screw relative to the plate prior to full implantation and subsequent locking of the screw to the plate in a given angulation upon full implantation. The proposed combination would remove the coupling element without substituting in anything that would preserve both features. Although the Petition explains how the proposed modified screw could angulate with respect to the plate (thereby allowing polyaxial coupling to the plate), the Petition does not explain how the proposed screw (or its head) could be locked to the plate at any particular angle. *See* Pet. 14–18.

Because Petitioner has not presented sufficient reasoning for why a person of ordinary skill in the art would have made the proposed combination and because Errico teaches away from such a combination, there is not a reasonable likelihood that Petitioner would prevail with respect to any of the claims challenged as obvious over Errico and Koshino or Campbell.

III. CONCLUSION

There is not a reasonable likelihood that Petitioner would prevail with respect to any challenged claim. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108.

IPR2016-00334
Patent RE43,008 E

IV. ORDER

Accordingly, it is

ORDERED that the Petition is denied.

IPR2016-00334
Patent RE43,008 E

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UNITED STATES PATENT AND TRADEMARK OFFICE

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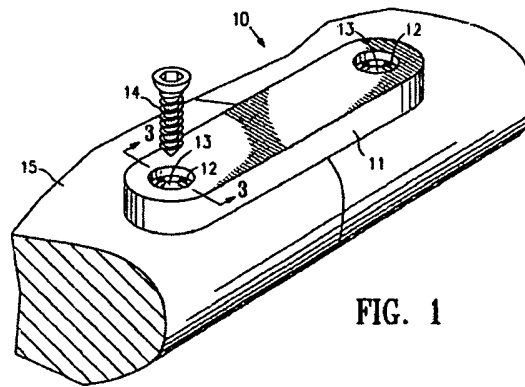


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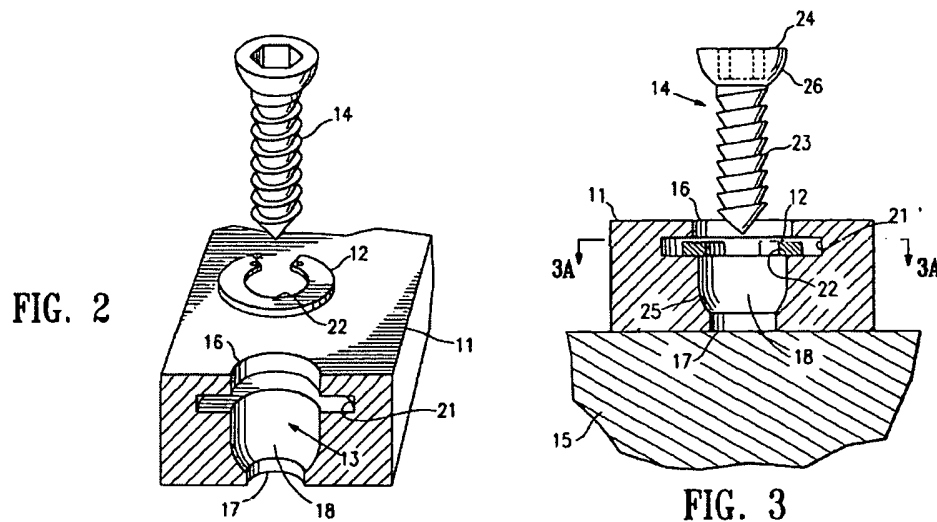


FIG. 3

Figures 2 and 3 illustrate exploded and sectional views, respectively, of a portion of the implant assembly of Figure 1. *Id.* at 4:34–37. Bore 13 includes first (i.e., anterior) opening 16, second (i.e., posterior) opening 17, and transverse passageway 18 extending between the openings. *Id.* at 4:26–

31. The bore also includes groove 21 that receives and retains annular collar 12. *Id.* at 4:31–34. The collar is c-shaped and defines passageway 22, as more easily seen in Figure 2. *See id.* at Fig. 2, refs. 12, 22.

The screw (securing element 14) has elongated body 23 and integral head 24. *Id.* at 4:45–48. The head has a flat anterior surface (not labelled) and curved posterior surface 26. *Id.* at 4:55–58. In a “preferred embodiment,” the collar is positioned in the groove before the screw is advanced through the transverse passageway of the bore. *Id.* at 2:14–17. In such an embodiment, the screw is posteriorly advanced through the collar 12, such that the curved posterior surface of the head applies a radially expanding force against an inner surface of the collar to expand the inner diameter of the collar. *Id.* at 4:67–5:6, Fig. 4. As the head passes beyond the collar, it enters posterior section 25 of passageway 18, and the collar returns to the unexpanded configuration. *Id.* at 5:13–19, Fig. 5. The flat anterior surface of the head has a diameter larger than that of the unexpanded inner diameter of the collar. *Id.* at 5:19–22, Fig. 5. “Thus, the anterior surface of the head will butt up against the posterior surface of the collar without expanding the collar, to prevent the securing element from being anteriorly displaced” (i.e., backing out of the bone). *Id.* at 5:23–27.

Posterior section 25, which ultimately houses the head of the screw, is longer than the head, thus allowing the head to be displaceable longitudinally (i.e., anterior-posterior) within the posterior section of the transverse passageway. *Id.* at 5:43–48, Fig. 5. Also, the elongated body of the screw has a smaller diameter than that of the second (i.e., posterior) opening 17 of the bore, thus allowing the body to be displaceable side-to-

side (i.e., medial-lateral) within the second opening 17. *Id.* at 5:48–52, Fig. 5. As a result of these tolerances, the screw is angularly displaceable, as illustrated in FIG. 6. Thus, the '008 patent discloses that the securing member (screw) may be inserted into the bone at angles other than strictly perpendicular. *Compare id.* at Fig. 5, with Fig. 6.

C. The Challenged Claims

Petitioner challenges claims 44–54 and 101–105. Pet. 1. Of these, claims 44 and 101 are independent. Claim 44 is illustrative and reproduced below.

44. An orthopedic implant assembly, comprising:

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion with a transverse dimension and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b) a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension; and
- c) a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing element disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration and smaller than the maximum transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of

the securing element within the posterior bore portion of the stabilizing element; and wherein the enlarged integral portion of the securing element is retained below the posterior surface of the stopping member.

D. Asserted Prior Art

The '008 patent issued December 6, 2011, from an application filed July 15, 2003. The '008 patent is a reissue of the '291 patent, which had issued July 17, 2001, from an application filed July 8, 1999.

The Petition asserts the following references as prior art to the claims of the '008 patent:

- (1) Errico,² pursuant to 35 U.S.C. § 102(a) and (e)(2);³
- (2) Koshino,⁴ pursuant to 35 U.S.C. § 102(a) and (e)(2); and
- (3) Campbell,⁵ pursuant to 35 U.S.C. § 102(e)(2).

Pet. 5.

E. Asserted Grounds

The Petition identifies the following asserted ground of unpatentability:

² U.S. Patent No. 5,876,402, filed Mar. 29, 1996, issued March 2, 1999. Ex. 1003.

³ The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the '008 patent issued was filed before that date, our citations to 35 U.S.C. §§ 102 and 103 are to their pre-AIA version.

⁴ U.S. Patent No. 5,879,389, filed Apr. 1, 1996, issued March 9, 1999. Ex. 1004.

⁵ U.S. Patent No. 6,258,089 B1, filed May 19, 1999, issued July 10, 2001. Ex. 1005.

References	Basis	Claims Challenged
Errico and Koshino or Campbell	§ 103(a)	44–54, 101–105

Pet. 6.

II. ANALYSIS

A. Claim Construction

“A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b). Pursuant to that standard, the claim language should be read in light of the specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.”) (internal quotation marks omitted). Any special definition for a claim term must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Neither party proposes an explicit construction for any term that requires construction for purposes of this Decision. One claim term, however, was expressly defined by applicants. In that regard, the '008 patent states: “The term *integral* should be understood to mean the securing element is a one-piece unit, with the head secured to the body so that there is no relative movement between the head and the body.” Ex. 1001, 2:9–12 (emphasis added). Claim 44 recites “a securing element which is configured

to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension.” Claim 101 recites “a securing element having an elongated body and an enlarged integral portion having an anterior surface.” We interpret the term “integral” in claims 44 and 101 as defined in the specification.

B. Obviousness in View of Errico and Koshino or Campbell

Petitioner contends that claims 44–54 and 101–105 would have been obvious over Errico and Koshino or Campbell. Pet. 6. In assessing obviousness, “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Additionally, secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18.

1. *Errico (Ex. 1003)*

Errico discloses an implant assembly “for use in stabilizing and immobilizing vertebral bodies” and which allows for “polyaxial” (multiple angled) placement and locking of screws. Ex. 1003, 4:12–14.

Figure 6 of Errico is reproduced below.

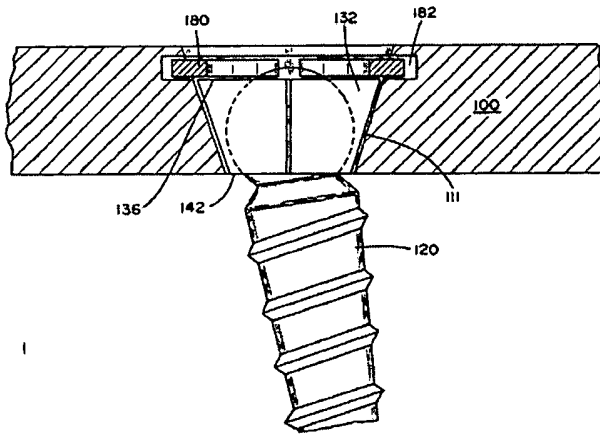


FIG.6

Figure 6 illustrates the implant assembly as fully assembled (except that it omits the bone to which the assembly would be attached). *Id.* at 5:24–25. The assembly includes plate 100 having an upper (anterior) surface and lower (posterior) surface. *Id.* at 5:24–25. With reference to Figure 3a, the plate includes multiple holes 110, 112, extending between the upper and lower surfaces. *Id.* at Fig. 3a. One such hole is shown in Figure 6 above; it is shaped roughly akin to that of an upside-down lampshade. The interior of the hole includes a groove or annular recess 182 within which is positioned c-shaped snap ring 180. Errico’s snap ring 180 can function precisely in the same manner as that of the collar 12 in the ’008 patent. *Id.* at 6:6–12. However, Errico’s screw 120 lacks an integral head that deflects the snap ring outwardly when the screw is advanced posteriorly into the hole, as conceded by Petitioner and as applicants argued during prosecution. Pet. 14; Ex. 1002, 122–23, 555. Instead, the snap ring 180 is deflected by a different component of the Errico assembly—coupling element 132—which is advanced posteriorly with the screw during implantation. *Id.* at 7:41–55.

Errico's screw consists of head portion 122, neck 124, and shaft 126.

Ex. 1003, 6:16–17; *see also* Fig. 4 (illustrating the screw in isolation). The head is semi-spherical in shape, which Errico states requires a section of a sphere that is greater in extent than a hemisphere and which exhibits an external contour that is equidistant from a center point of the head. *Id.* at 6:26–31.

The head is mounted within the coupling element, which has “interior semi-spherical volume 140 which is ideally suited for holding the head portion 122 of the screw 120, and permitting the screw to rotate [(i.e., angulate) prior to the screw being fully advanced into bone] through a range of angles.” *Id.* at 7:8–11, Fig. 5, ref. 140. The coupling element has an outer surface 134 corresponding to that of holes in the plate (i.e., roughly that of an upside-down lampshade). *Id.* at 6:58–67. However, the outer surface is not circumferentially continuous. *Id.* at 7:25–30. It includes axial slot 149, which allows the coupling element to be expanded to facilitate insertion of the head portion of the screw into the semi-spherical interior volume. *Id.* at 7:30–34, Fig. 5. The axial slot also allows the coupling element to be contracted when inserted into a hole of the plate. *Id.* This contraction “crush[es] against the head 122 upon the application of an inwardly directed radial force,” thereby locking the angle with which the screw has been advanced. *Id.*; *id.* at 5:5–7.

2. *Koshino (Ex. 1004)*

Koshino discloses an implant for hard tissue (e.g., bone) designed to be attached to such tissue in a way that avoids subsequent loosening of the implant. Ex. 1004 at 1:5–13, 1:22, 3:23–25. The implant is attached to hard tissue with one or more “fixation screws.” *Id.* at 4:52–55.

Figure 6 of Koshino is reproduced below.

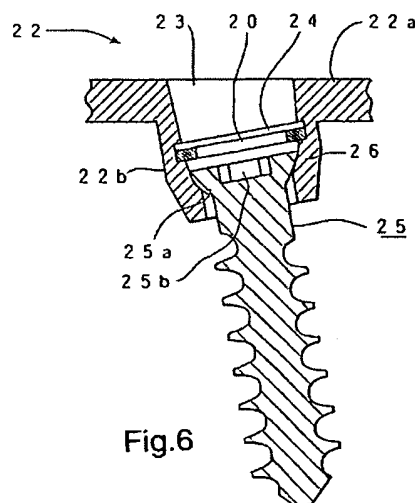


Figure 6 illustrates fixation screw 25 inserted through hole 23 of plate 22a of implant 22. *Id.* at 12:37–41, Fig. 6. The hole extends through projection 22b of the plate and is angled with respect to the plate. *Id.* Thus, the screw likewise is angled with respect to the plate. *Id.* at Fig. 6. The screw has head 25a that has a flat anterior surface and curved posterior surface, from which extends the threaded body of the screw.

3. *Campbell (Ex. 1005)*

Campbell discloses a cervical plate and fixation system, designed to be attached to the spine with fixation screws in a manner that inhibits loosening of the device after implantation. Ex. 1005, 1:12–15; 2:10–26. Figure 20 of Campbell is reproduced below.

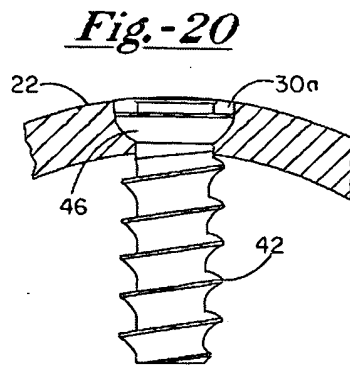


Figure 20 illustrates a sectional view of a portion of cervical plate 22 with “fastener” (screw) inserted. *Id.* at 4:22–26. The screw has elongated shank 42 with threads and “enlarged head 46 with a spherical profile 48 sized to allow the head to nest within spherical section 34 of the aperture.” *Id.* at 5:45–51 (spherical section 34 not labelled in Fig. 20).

4. Petitioner’s Application of the Art to the Challenged Claims

Petitioner concedes that Errico alone does not disclose the subject matter of the challenged claims; stating:

The *only* difference between the challenged claims of the ’008 patent and Errico is that the claimed invention of the ’008 patent uses the head of the screw itself to expand the stopping member and provide a surface to prevent the screw from backing out, whereas Errico includes an extra part – a coupling element that surrounds the screw head – to perform these same functions.

Pet. 14.

Citing declaration testimony of Bret A. Ferree, M.D., the Petition argues that using a screw head from either Koshino or Campbell instead of Errico’s coupling element “is nothing more than an obvious choice in design, and one that would have been readily contemplated and implemented

by a POSA at the time of the invention, for both mechanical and clinical reasons, with a reasonable expectation of success.” *Id.* (citing Ex. 1006 ¶¶ 38–39). The cited testimony, however, is not persuasive. In paragraph 38, Dr. Ferree simply testifies to the ultimate conclusion of law that the claims are obvious. Ex. 1006 ¶ 38. And paragraph 39 is virtually identical to the just-quoted conclusory argument set forth in the Petition. *Id.* at ¶ 39.

The Petition and declaration do offer additional arguments and testimony to support the proposed modification but they too are insufficient. First, the Petition states, with support from Dr. Ferree, that “it was known in the orthopedic industry at the time of the filing of the ’008 patent that it was desirable for orthopedic implants to be limited to the minimum number of components necessary” due to “cost of manufacturing, inventory, ease of use, crevice corrosion, and simplicity of surgery.” Pet. 14 (citing Ex. 1006 ¶ 40). Limiting the number of components may be desirable, if the reduction can be achieved without compromising design goals. Yet, Errico expressly teaches a more complex structure because of the benefits it provides. Those benefits include that the screw can be angulated in countless directions to provide a surgeon flexibility during implantation (Ex. 1003, 7:22–24), that the screw is locked into whatever angle ultimately is chosen by the “crush locking” of the interior semi-spherical volume of the coupling element against the semi-spherical head (*id.* at 5:5–7), that the coupling element fully mates with the hole in the plate regardless of the angle of the screw (*id.* at 6:62–67), and that the coupling element is secured just beneath (posterior to) the snap ring (*id.* at 7:51–55, Fig. 6).

The Petition next states, with support from Dr. Ferree, that a person of

ordinary skill in the art “would understand that it is critical for the bone plate to have as thin a profile as possible” but that “[t]he coupling element in Errico . . . requires more space in the bore, and thus necessarily increases the profile (thickness) of the plate.” Pet. 15 (citing Ex. 1006 ¶¶ 42–43).

However, neither the Petition nor Dr. Ferree cites evidence that using a coupling element requires more anterior-posterior space in the bore than using a screw head alone. See Pet. 15; Ex. 1006 ¶¶ 42–43. In fact, the record evidence tends to show the opposite. In Koshino, as well as in the ’008 patent, a substantial gap exists above the screw head. See Ex. 1004, Fig. 6; Ex. 1001, Figs. 5–6.⁶ As discussed above, the ’008 patent describes this gap as desirable because it, along with transverse tolerance, accommodates angulation of the screw. Ex. 1001, 5:43–52.

Petitioner has not shown an apparent reason to combine the relied upon teachings of Errico and Koshino or Campbell in the manner set forth in the challenged claims. See *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (requiring, for obviousness, “an apparent reason to combine the known elements in the fashion claimed by the patent at issue”).

Additionally, Errico teaches away from the proposed combination because such a combination would render Errico inoperable for its intended purpose. See *In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1381 (Fed. Cir. 2007) (“Additionally, a reference may teach away from a use when that use would render the result inoperable.”). Errico seeks to provide an

⁶ Campbell also shows a gap above the screw head, although it appears to be relatively smaller than the gap above the screw head in Koshino or the ’008 patent. See Ex. 1005, Fig. 22.

implantable plate “having a polyaxial coupling of the screw to the plate, whereby a single plate is compatible with a wide range of screw-in angles” and “which has a simple and effective locking mechanism for *locking the bone screw to the plate.*” Ex. 1003, 3:59–67 (emphasis added).

Modifying Errico as Petitioner proposes would destroy at least one of these features. In Errico, the coupling element facilitates angulation of the screw relative to the plate prior to full implantation and subsequent locking of the screw to the plate in a given angulation upon full implantation. The proposed combination would remove the coupling element without substituting in anything that would preserve both features. Although the Petition explains how the proposed modified screw could angulate with respect to the plate (thereby allowing polyaxial coupling to the plate), the Petition does not explain how the proposed screw (or its head) could be locked to the plate at any particular angle. *See* Pet. 14–18.

Because Petitioner has not presented sufficient reasoning for why a person of ordinary skill in the art would have made the proposed combination and because Errico teaches away from such a combination, there is not a reasonable likelihood that Petitioner would prevail with respect to any of the claims challenged as obvious over Errico and Koshino or Campbell.

III. CONCLUSION

There is not a reasonable likelihood that Petitioner would prevail with respect to any challenged claim. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108.

IPR2016-00333
Patent RE43,008 E

IV. ORDER

Accordingly, it is

ORDERED that the Petition is denied.

IPR2016-00333
Patent RE43,008 E

For Petitioner:

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For Patent Owner:

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DEPUY SYNTHES SALES, INC,
Petitioner,

v.

ACANTHA LLC,
Patent Owner.

Case IPR2016-00329
Patent RE43,008 E

Before MEREDITH C. PETRAVICK, MICHAEL J. FITZPATRICK, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION
Denying *Inter Partes* Review
35 U.S.C. § 314; 37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, DePuy Synthes Sales, Inc., filed a Petition to institute an *inter partes* review of claims 1–5, 9–22, and 29–37 of U.S. Patent No. RE43,008 E (Ex. 1001, “the ’008 patent”) pursuant to 35 U.S.C. § 311(a). Paper 1 (“Pet.”). Patent Owner, Acantha, LLC, filed a Preliminary Response pursuant to 35 U.S.C. § 313. Paper 9 (“Prelim. Resp.”).¹

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b); 37 C.F.R. § 42.4(a). Upon consideration of the Petition, and for the reasons explained below, we determine that there is not a reasonable likelihood that Petitioner would prevail with respect to any challenged claim. *See* 35 U.S.C. § 314(a). Accordingly, we deny the Petition.

A. Related Matters

The ’008 patent issued December 6, 2011, from an application filed July 15, 2003. The ’008 patent is a reissue of U.S. Patent No. 6,261,291 B1 (“the ’291 patent”), which had issued July 17, 2001, from an application filed July 8, 1999. The ’008 patent has 105 claims, with claims 1–28 having issued in the original ’291 patent and claims 29–105 being added during reissue.

¹ In the body of the Preliminary Response, Patent Owner refers to itself as Acantha, *Inc.* Prelim. Resp. 1. This appears to be a typographical error, as the Preliminary Response is captioned with Acantha, LLC, as the Patent Owner and was filed by attorneys representing Acantha, LLC. *Id.* at 61. Also, in its mandatory notices, Patent Owner identifies itself as Acantha, LLC. *See* Papers 6, 8.

The parties identify *Acantha LLC v. DePuy Synthes Sales, Inc.*, Civil Action No. 1:15-cv-01257 (E.D. Wis.), as a related judicial matter. Pet. 1; Paper 6, 2. Additionally, Petitioner has filed two separate petitions for *inter partes* review challenging other claims of the '008 patent. See Cases IPR2016-00333; IPR2016-00334.

B. The '008 Patent

The '008 patent relates to orthopedic implant assemblies for joining bone segments and methods of using such assemblies. Ex. 1001, 1:11–13. The specification explains that “[a] variety of medical conditions may necessitate the joining of bone segments together, as for example, in the treatment of broken bones, spinal disorders, or the fusion of vertebrae following the removal of a spinal disk.” *Id.* at 1:14–17. The assemblies may be rods or plates that are attached to the bone with screws. *Id.* at 1:17–21. “However, one disadvantage has been the tendency of the implants to loosen or detach from the bone over time.” *Id.* at 1:24–25.

The '008 patent describes an improved implant assembly designed to minimize detachment from bone. Generally, the implant assembly includes “a stabilizing element [e.g., a plate], a securing element [e.g., a screw] which attaches the stabilizing element to the patient’s bone, and a stopping member in the stabilizing element which defines at least in part a passageway and which inhibits or prevents the securing element from loosening or backing out of the bone.” *Id.* at 1:32–38.

Figure 1 of the '008 patent is reproduced below.

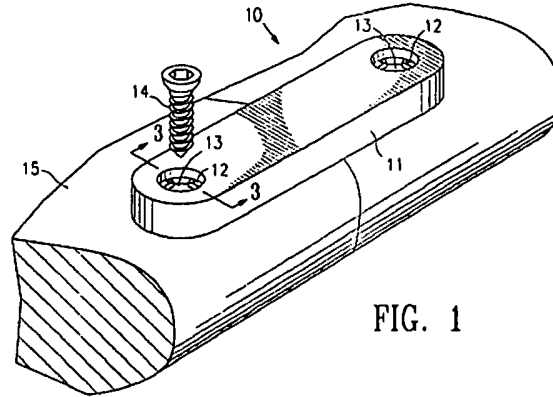


FIG. 1

Figure 1 illustrates orthopedic implant assembly 10 for attachment to a patient's bone 15. *Id.* at 4:16–20. The assembly includes stabilizing element 11 having bores 13, each of which may receive securing element 14 (here, a screw). *Id.*

Figures 2 and 3 are reproduced below.

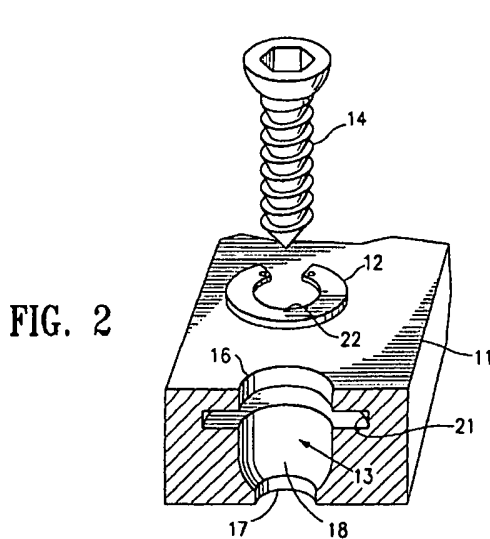


FIG. 2

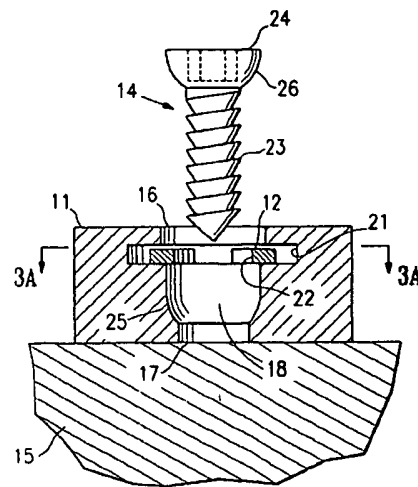


FIG. 3

Figures 2 and 3 illustrate exploded and sectional views, respectively, of a portion of the implant assembly of Figure 1. *Id.* at 4:34–37. Bore 13 includes first (i.e., anterior) opening 16, second (i.e., posterior) opening 17, and transverse passageway 18 extending between the openings. *Id.* at 4:26–

31. The bore also includes groove 21 that receives and retains annular collar 12. *Id.* at 4:31–34. The collar is c-shaped and defines passageway 22, as more easily seen in Figure 2. *See id.* at Fig. 2, refs. 12, 22.

The screw (securing element 14) has elongated body 23 and integral head 24. *Id.* at 4:45–48. The head has a flat anterior surface (not labelled) and curved posterior surface 26. *Id.* at 4:55–58. In a “preferred embodiment,” the collar is positioned in the groove before the screw is advanced through the transverse passageway of the bore. *Id.* at 2:14–17. In such an embodiment, the screw is posteriorly advanced through the collar 12, such that the curved posterior surface of the head applies a radially expanding force against an inner surface of the collar to expand the inner diameter of the collar. *Id.* at 4:67–5:6, Fig. 4. As the head passes beyond the collar, it enters posterior section 25 of passageway 18, and the collar returns to the unexpanded configuration. *Id.* at 5:13–19, Fig. 5. The flat anterior surface of the head has a diameter larger than that of the unexpanded inner diameter of the collar. *Id.* at 5:19–22, Fig. 5. “Thus, the anterior surface of the head will butt up against the posterior surface of the collar without expanding the collar, to prevent the securing element from being anteriorly displaced” (i.e., backing out of the bone). *Id.* at 5:23–27.

Posterior section 25, which ultimately houses the head of the screw, is longer than the head, thus allowing the head to be displaceable longitudinally (i.e., anterior-posterior) within the posterior section of the transverse passageway. *Id.* at 5:43–48, Fig. 5. Also, the elongated body of the screw has a smaller diameter than that of the second (i.e., posterior) opening 17 of the bore, thus allowing the body to be displaceable side-to-

side (i.e., medial-lateral) within the second opening 17. *Id.* at 5:48–52, Fig. 5. As a result of these tolerances, the screw is angularly displaceable, as illustrated in FIG. 6. Thus, the '008 patent discloses that the securing member (screw) may be inserted into the bone at angles other than strictly perpendicular. *Compare id.* at Fig. 5, with Fig. 6.

C. The Challenged Claims

Petitioner challenges claims 1–5, 9–22, 29–37. Pet. 1. Of these, claims 1, 21, and 36 are independent. Claim 1 is illustrative and reproduced below.

1. An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.

D. Asserted Prior Art

The '008 patent issued December 6, 2011, from an application filed July 15, 2003. The '008 patent is a reissue of the '291 patent, which had

issued July 17, 2001, from an application filed July 8, 1999.

The Petition asserts the following references as prior art to the claims of the '008 patent:

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- (3) Campbell,⁵ pursuant to 35 U.S.C. § 102(e)(2).

Pet. 5.

E. Asserted Grounds

The Petition identifies the following asserted grounds of unpatentability:

References	Basis	Claims Challenged
Errico and Koshino	§ 103(a)	1–5, 9–22, 29–37
Errico and Campbell	§ 103(a)	36, 37

Pet. 5–6.

² U.S. Patent No. 5,876,402, filed Mar. 29, 1996, issued March 2, 1999. Ex. 1003.

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the '008 patent issued was filed before that date, our citations to 35 U.S.C. §§ 102 and 103 are to their pre-AIA version.

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⁵ U.S. Patent No. 6,258,089 B1, filed May 19, 1999, issued July 10, 2001. Ex. 1005.

II. ANALYSIS

A. Claim Construction

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Neither party proposes an explicit construction for any term that requires construction for purposes of this Decision. One claim term, however, was expressly defined by applicants. In that regard, the '008 patent states: “The term *integral* should be understood to mean the securing element is a one-piece unit, with the head secured to the body so that there is no relative movement between the head and the body.” Ex. 1001, 2:9–12 (emphasis added). Each of claims 1 and 21 recites “a securing element having an elongated body, and a head at one end of the body and integral therewith.” Claim 36 recites “a securing member with an elongated body and an enlarged integral portion having a maximum transverse dimension.” We interpret the term “integral” in claims 1, 21, and 36 as defined in the

specification.

B. Obviousness in View of Errico and Koshino

Petitioner contends that claims 1–5, 9–22, and 29–37 would have been obvious over Errico and Koshino. Pet. 5. In assessing obviousness, “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Additionally, secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.” *Graham*, 383 U.S. at 17–18.

1. *Errico (Ex. 1003)*

Errico discloses an implant assembly “for use in stabilizing and immobilizing vertebral bodies” and which allows for “polyaxial” (multiple angled) placement and locking of screws. Ex. 1003, 4:12–14.

Figure 6 of Errico is reproduced below.

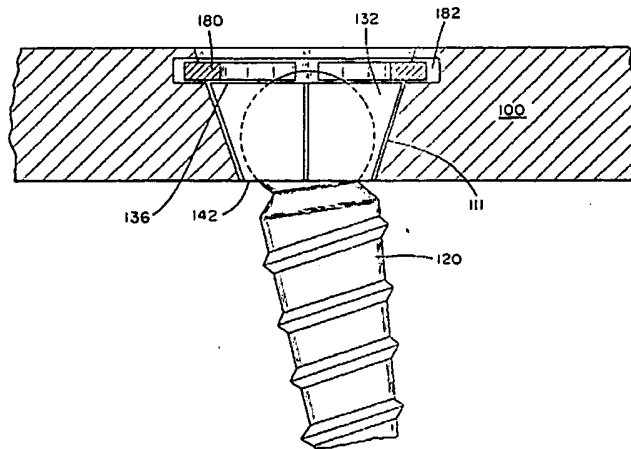


Figure 6 illustrates the implant assembly as fully assembled (except that it omits the bone to which the assembly would be attached). *Id.* at 5:24–25. The assembly includes plate 100 having an upper (anterior) surface and lower (posterior) surface. *Id.* at 5:24–25. With reference to Figure 3a, the plate includes multiple holes 110, 112, extending between the upper and lower surfaces. *Id.* at Fig. 3a. One such hole is shown in Figure 6 above; it is shaped roughly akin to that of an upside-down lampshade. The interior of the hole includes a groove or annular recess 182 within which is positioned c-shaped snap ring 180. Errico's snap ring 180 can function precisely in the same manner as that of the collar 12 in the '008 patent. *Id.* at 6:6–12. However, Errico's screw 120 lacks an integral head that deflects the snap ring outwardly when the screw is advanced posteriorly into the hole, as conceded by Petitioner and as applicants argued during prosecution. Pet. 13; Ex. 1002, 122–23, 555. Instead, the snap ring 180 is deflected by a different component of the Errico assembly—coupling element 132—which is advanced posteriorly with the screw during implantation. *Id.* at 7:41–55.

Errico's screw consists of head portion 122, neck 124, and shaft 126.

Ex. 1003, 6:16–17; *see* also Fig. 4 (illustrating the screw in isolation). The head is semi-spherical in shape, which Errico states requires a section of a sphere that is greater in extent than a hemisphere and which exhibits an external contour that is equidistant from a center point of the head. *Id.* at 6:26–31.

The head is mounted within the coupling element, which has “interior semi-spherical volume 140 which is ideally suited for holding the head portion 122 of the screw 120, and permitting the screw to rotate [(i.e., angulate) prior to the screw being fully advanced into bone] through a range of angles.” *Id.* at 7:8–11, Fig. 5, ref. 140. The coupling element has an outer surface 134 corresponding to that of holes in the plate (i.e., roughly that of an upside-down lampshade). *Id.* at 6:58–67. However, the outer surface is not circumferentially continuous. *Id.* at 7:25–30. It includes axial slot 149, which allows the coupling element to be expanded to facilitate insertion of the head portion of the screw into the semi-spherical interior volume. *Id.* at 7:30–34, Fig. 5. The axial slot also allows the coupling element to be contracted when inserted into a hole of the plate. *Id.* This contraction “crush[es] against the head 122 upon the application of an inwardly directed radial force,” thereby locking the angle with which the screw has been advanced. *Id.*; *id.* at 5:5–7.

2. Koshino (Ex. 1004)

Koshino discloses an implant for hard tissue (e.g., bone) designed to be attached to such tissue in a way that avoids subsequent loosening of the implant. Ex. 1004 at 1:5–13, 1:22, 3:23–25. The implant is attached to hard tissue with one or more “fixation screws.” *Id.* at 4:52–55.

Figure 6 of Koshino is reproduced below.

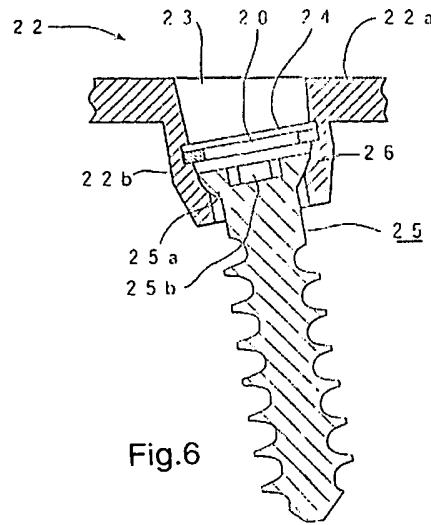


Figure 6 illustrates fixation screw 25 inserted through hole 23 of plate 22a of implant 22. *Id.* at 12:37–41, Fig. 6. The hole extends through projection 22b of the plate and is angled with respect to the plate. *Id.* Thus, the screw likewise is angled with respect to the plate. *Id.* at Fig. 6. The screw has head 25a that has a flat anterior surface and curved posterior surface, from which extends the threaded body of the screw.

3. *Petitioner's Application of the Art to the Challenged Claims*

Independent claim 1 recites a securing element (e.g., a screw) “having an elongated body, and a head at one end of the body and integral therewith.” Claim 1 further recites the integral head “having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element” (the “screw head size limitations”). Independent

claims 21 and 36 include similar limitations.

Petitioner concedes that Errico alone does not disclose these limitations. Pet. 13. This is because, although the Errico screw includes an integral head, Errico does not disclose the screw head size limitations; instead it “includes an extra part – a coupling element that surrounds the screw head – to perform the same functions.” *Id.*

Citing declaration testimony of Bret A. Ferree, M.D., the Petition argues that using a screw head instead of Errico’s coupling element “is nothing more than an obvious choice in design, and one that would have been readily contemplated and implemented by a POSA at the time of the invention, for both mechanical and clinical reasons, with a reasonable expectation of success.” *Id.* (citing Ex. 1006 ¶¶ 37–38). The cited testimony, however, is not persuasive. In paragraph 37, Dr. Ferree simply testifies to the ultimate conclusion of law that the claims are obvious. Ex. 1006 ¶ 37. And paragraph 38 is virtually identical to the just-quoted conclusory argument set forth in the Petition. *Id.* at ¶ 38.

The Petition and declaration do offer additional arguments and testimony to support the proposed modification but they too are insufficient. First, the Petition states, with support from Dr. Ferree, that “it was known in the orthopedic industry at the time of the filing of the ’008 patent that it was desirable for orthopedic implants to be limited to the minimum number of components necessary” due to “cost of manufacturing, inventory, ease of use, crevice corrosion, and simplicity of surgery.” Pet. 13–14 (citing Ex. 1006 ¶ 39). Limiting the number of components may be desirable, if the reduction can be achieved without compromising design goals. Yet, Errico

expressly teaches a more complex structure because of the benefits it provides. Those benefits include that the screw can be angulated in countless directions to provide a surgeon flexibility during implantation (Ex. 1003, 7:22–24), that the screw is locked into whatever angle ultimately is chosen by the “crush locking” of the interior semi-spherical volume of the coupling element against the semi-spherical head (*id.* at 5:5–7), that the coupling element fully mates with the hole in the plate regardless of the angle of the screw (*id.* at 6:62–67), and that the coupling element is secured just beneath (posterior to) the snap ring (*id.* at 7:51–55, Fig. 6).

The Petition next states, with support from Dr. Ferree, that a person of ordinary skill in the art “would understand that it is critical for the bone plate to have as thin a profile as possible” but that “[t]he coupling element in Errico . . . requires more space in the bore, and thus necessarily increases the profile (thickness) of the plate.” Pet. 14 (citing Ex. 1006 ¶¶ 41–42). However, neither the Petition nor Dr. Ferree cites evidence that using a coupling element requires more anterior-posterior space in the bore than using a screw head alone. *See* Pet. 14; Ex. 1006 ¶¶ 41–42. In fact, the record evidence tends to show the opposite. In Koshino, as well as in the ’008 patent, a substantial gap exists above the screw head. *See* Ex. 1004, Fig. 6; Ex. 1001, Figs. 5–6. As discussed above, the ’008 patent describes this gap as desirable because it, along with transverse tolerance, accommodates angulation of the screw. Ex. 1001, 5:43–52.

Petitioner has not shown an apparent reason to combine the relied upon teachings of Errico and Koshino in the manner set forth in independent claims 1, 21, and 36. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418

(2007) (requiring, for obviousness, “an apparent reason to combine the known elements in the fashion claimed by the patent at issue”).

Additionally, Errico teaches away from the proposed combination because such a combination would render Errico inoperable for its intended purpose. *See In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1381 (Fed. Cir. 2007) (“Additionally, a reference may teach away from a use when that use would render the result inoperable.”). Errico seeks to provide an implantable plate “having a polyaxial coupling of the screw to the plate, whereby a single plate is compatible with a wide range of screw-in angles” and “which has a simple and effective locking mechanism for *locking the bone screw to the plate.*” Ex. 1003, 3:59–67 (emphasis added).

Modifying Errico as Petitioner proposes would destroy at least one of these features. In Errico, the coupling element facilitates angulation of the screw relative to the plate prior to full implantation and subsequent locking of the screw to the plate in a given angulation upon full implantation. The proposed combination would remove the coupling element without substituting anything that would preserve both features. Although the Petition explains how the proposed modified screw could angulate with respect to the plate (thereby allowing polyaxial coupling to the plate), the Petition does not explain how the proposed screw (or its head) could be locked to the plate at any particular angle. *See* Pet. 13–17.

Because Petitioner has not presented sufficient reasoning for why a person of ordinary skill in the art would have made the proposed combination and because Errico teaches away from such a combination, there is not a reasonable likelihood that Petitioner would prevail with respect

to any of the claims challenged as obvious over Errico and Koshino.

C. Obviousness in View of Errico and Campbell

Petitioner contends that claims 36 and 37 would have been obvious over Errico and Campbell. Pet. 6.

1. *Campbell (Ex. 1005)*

Campbell discloses a cervical plate and fixation system, designed to be attached to the spine with fixation screws in a manner that inhibits loosening of the device after implantation. Ex. 1005, 1:12–15; 2:10–26. Figure 20 of Campbell is reproduced below.

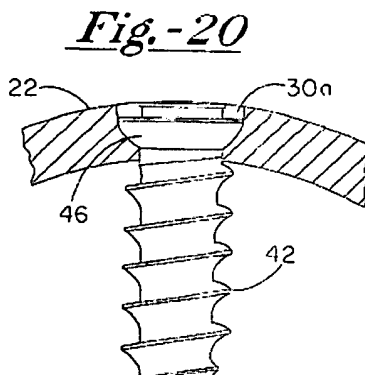


Figure 20 illustrates a sectional view of a portion of cervical plate 22 with “fastener” (screw) inserted. *Id.* at 4:22–26. The screw has elongated shank 42 with threads and “enlarged head 46 with a spherical profile 48 sized to allow the head to nest within spherical section 34 of the aperture.” *Id.* at 5:45–51 (spherical section 34 not labelled in Fig. 20).

2. *Petitioner’s Application of the Art to the Challenged Claims*

Independent claim 36 is directed to “[a] method of attaching an orthopedic implant assembly to a bone of a patient.” The claimed method

includes the following:

- a) providing a securing member [e.g., a screw] with an elongated body and an enlarged integral portion [e.g., a screw head] having a maximum transverse dimension . . .

and

- c) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member thereby displacing the stopping member to the first configuration and is disposed in the posterior bore portion, the stopping member then returning to the second configuration to retain the enlarged integral portion within the posterior bore portion; and wherein the enlarged integral portion of the securing member is retained within the posterior bore portion below the posterior surface of the stopping member.

Claim 37 depends from claim 36.

In challenging these claims, Petitioner proposes a combination similar to that of Errico and Koshino. Specifically, it proposes “to remove the coupling device from the Errico invention and to implement the configuration of the screw head disclosed in Campbell.” Pet. 53. Petitioner argues that a person of ordinary skill in the art would combine Errico and Campbell for the “same reasons” that person would combine Errico and Koshino. Pet. 52. As discussed above, however, we find those reasons unpersuasive. Additionally, for the same reasons that Errico teaches away from the proposed combination of Errico and Koshino, it also teaches away from the proposed combination of Errico and Campbell.

Because Petitioner has not presented sufficient reasoning for why a person of ordinary skill in the art would have made the proposed

combination and because Errico teaches away from such a combination, there is not a reasonable likelihood that Petitioner would prevail with respect to any of the claims challenged as obvious over Errico and Campbell.

III. CONCLUSION

There is not a reasonable likelihood that Petitioner would prevail with respect to any challenged claim. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is denied.

IPR2016-00329
Patent RE43,008 E

For Petitioner:

Calvin Griffith
cpgriffith@jonesday.com

Kenneth Luchesi
kluchesi@jonesday.com

For Patent Owner:

Jay Guiliano
jguiliano@polsinelli.com

Ryan Murphy
rmurphy@polsinelli.com

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : RE43,008 E
APPLICATION NO. : 10/620154
DATED : December 6, 2011
INVENTOR(S) : David J. Talaber and James R. Lloyd

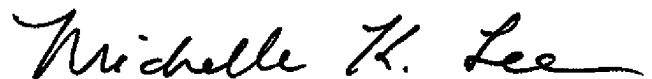
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, item (73) assignee

Change: "Assignee: Acantha, Inc." to --Assignee: ACANTHA LLC--.

Signed and Sealed this
Thirty-first Day of March, 2015



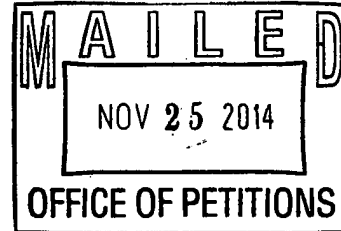
Michelle K. Lee
Director of the United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Novak Druce Connolly Bove + Quigg, LLP
1875 Eye Street N.W.
Eleventh Floor
Washington DC 20006



In re Patent No. RE43,008
Issue Date: December 6, 2011
Application No. 10/620,154
Filed: July 15, 2003
Attorney Docket No. 9683.002.REUS00

DECISION ON PETITION

This is a decision on the Petition Under 37 CFR 1.183 In Response To Denial Of Request For Certificate Of Correction, filed August 14, 2014, which is being treated as a Petition Under 37 CFR §3.81(b), to correct assignee's name. A completed Certificate of Correction Form (PTO/SB/44) was submitted with Petition.

The petition under 37 CFR §3.81(b) is **GRANTED**.

Petitioner urges that the present Petition was submitted to correct assignee's name on the previously submitted PTOL 85B and such error was applicants mistake. Accordingly, petitioner requests, in effect, that the Title Page of the above-identified patent be corrected, via issuance of Certificate of Correction, to correct the assignee's name identified thereof from:

"Acantha, Inc."

to:

--Acantha LLC--

37 CFR 3.81(b), effective June 25, 2004, reads:

After payment of the issue fee: Any request for issuance of an application in the name of the assignee submitted after the date of payment of the issue fee, and any request for a patent to be corrected to state the name of the assignee, must state that the assignment was submitted for recordation as set forth in §3.11 before issuance of the patent, and must include a request for a certificate of correction under §1.323 of this chapter (accompanied by the fee set forth in §1.20(a) and the processing fee set forth in §1.17(i) of this chapter.

The requisite \$100.00 fee (Fee Code 1811), as set forth under 37 CFR §1.20(a), and the requisite \$140.00 processing fee (Fee Code 1830), as set forth under 37 CFR §1.17(i), have been submitted. Further, Office assignment records are consistent with the requested correction. Accordingly, since the Petition complies with the provisions of 37 CFR §3.81(b), it is appropriate for the Office to issue a Certificate of Correction in accordance with the content of the Form submitted with Petition.

Inquiries related this communication should be directed to the undersigned at (571)272-3213.

Any questions concerning the issuance of a Certificate of Correction should be directed to the Certificates of Correction Branch at (703)756-1814.

This matter is being referred to the Certificates of Correction Branch for processing of a Certificate of Correction in U.S. Patent No. RE43,008.



Cheryl Gibson-Baylor
Petitions Paralegal Specialist
Office of Petitions

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: David J. Talaber et al. : Examiner: RAMANA, ANURADHA

Application No.: 10/620,154 : Confirmation No.: 8486

Patent No. RE43,008 E : Art Unit: 3775

Filing Date: July 15, 2003

For: ORTHOPEDIC IMPLANT ASSEMBLY

**PETITION UNDER 37 CFR 1.183 IN RESPONSE TO DENIAL OF REQUEST FOR
CERTIFICATE OF CORRECTION**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants on June 5, 2014 submitted a REQUEST UNDER 37 CFR 3.81(b) FOR A PATENT TO BE CORRECTED to state the correct name of the assignee and a REQUEST FOR CERTIFICATE OF CORRECTION OF APPLICANT MISTAKE to make this correction.

By a paper mailed July 16, 2014 the USPTO issued a Denial of the Request.

The Denial says a petition to correct the Assignee, under 37 CFR 1.183 should include:

- (1) the petition fee set forth in 37 CFR 1.17(i)(1)(currently \$140, \$70, \$35 for large, small, and micro entities, respectively);
- (2) the correct name and address of the assignee; and
- (3) the reel and frame number where the assignment is recorded or proof of the date the assignment was submitted for recordation.

Patent Owner submits the REQUEST UNDER 37 CFR 3.81(b) coupled with the REQUEST FOR CERTIFICATE OF CORRECTION included the 37 CFR 1.17(i) fee and this information, except for the address. 37 CFR 3.81(b), as well as MPEP 307, do not appear to require the address of the Assignee unless it is being changed. Thus, it is not apparent why an address is required for the Petition.

However, to advance prosecution, Patent Owner hereby provides the information and, if needed, authorization to charge the 37 CFR 1.17(i) fee.

(1) As noted above, Patent Owner enclosed the fee required by 37 CFR 1.17(i) with the REQUEST UNDER 37 CFR 3.81(b). However, if another processing fee is required by 37 CFR 1.17(i) for the present Petition please charge it to the undersigned's Deposit Account No. 14-1437, Order No. 9683.002.REUS00.

(2a) the correct name of the assignee is ACANTHA LLC.

(2b) the correct address of the assignee is that of record, namely:

5185 Charlotte Way
Livermore, CALIFORNIA 94550

(3) The assignment was submitted for recordation as set forth in 37 CFR 3.11 before issuance of the patent. The assignment from the inventors to ACANTHA LLC for US Patent 6261291 which was the predecessor to this reissue patent was recorded June 4, 2002 at the Reel/Frame 012967/0893.

In view of the above Patent Owner petitions the Office to waive the rules under 37 CFR 1.183, reconsider the Denial, grant this Petition which supplements Patent Owner's REQUEST UNDER 37 CFR 3.81(b) REQUEST UNDER 37 CFR 3.81(b), and grant Patent Owner's REQUEST FOR CERTIFICATE OF CORRECTION OF APPLICANT MISTAKE submitted June 5, 2014.

If any additional fee is deemed necessary, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 14-1437, Order No. 9683.002.REUS00.

Date: August 13, 2014.

NOVAK DRUCE CONOLLY
BOVE + QUIGG LLP
1875 Eye Street, NW, 11th Flr
Washington, D.C. 20006
Tel: 202.659.0100 / Fax: 202.659.0105
Customer No. 77213

Respectfully Submitted,

By: /anthony p venturino/
Anthony P. Venturino
Registration No. 31674

Electronic Acknowledgement Receipt

EFS ID:	19872000
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	77213
Filer:	Anthony Peter Venturino
Filer Authorized By:	
Attorney Docket Number:	9683.002.REUS00
Receipt Date:	14-AUG-2014
Filing Date:	15-JUL-2003
Time Stamp:	18:05:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review/processing depending on status	9683-002-REUS00-Petition.pdf	101890 42cbd8553d9572eaa558b375fcc7e4c4cb1beb2c	no	2

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

July 16, 2014

Novak Druce Connolly Bove + Quigg, LLP
1875 Eye Street N.W.
Eleventh Floor
Washington DC 20006

Patent No.: R,343,008 E
Inventor(s): Talaber et al.
Issued: Dec. 6, 2011
Title: ORTHOPEDIC IMPLANT ASSEMBLY
Docket No.: 9683.002.REUS00

Re: Request for Certificate of Correction

Consideration has been given your request for the issuance of a Certificate of Correction for the above-identified patent under the provisions of Rule 1.322 and 1.323.

Granting of a petition under 37 CFR 1.183, requesting the requirements of 37 CFR 3.81 to be waived, is required to correct applicant's error in the Assignee, when the correct name of the assignee was not provided in accordance with either section 3.81(a) or (b) (either no name or an incorrect name was provided in item 5 of the Issue Fee Transmittal, when the assignment had been recorded or submitted for recordation at the time the issue fee was paid, including after issuance of the patent.

A petition to correct the Assignee, under 37 CFR 1.183 should include:

- (1) the petition fee set forth in 37 CFR 1.17(i)(1) (currently \$140, \$70, \$35 for large, small, and micro entities, respectively);
- (2) the correct name and address of the assignee; and
- (3) the reel and frame number where the assignment is recorded or proof of the date the assignment was submitted for recordation.

Any petition under 37 CFR 1.183 should be directed to the attention of the Assistant Commissioner for Patents, using the following mailing address or FAX number.

By Mail: Mail Stop Petitions
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By Fax: (571) 273-8300



UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attn.: Office of Petitions

If, the petition under 37 CFR 1.183, is filed and granted, the patentee would be entitled to a Certificate of Correction under 37 CFR 1.323 (required fee currently \$100), due to the mistake in not complying with CFR 3.81.

In view of the foregoing, your request is hereby denied.

Ennis Young
Office of Data Management
Certificates of Correction Branch
(571) 272-3435 or (703) 756-1814

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David J. Talaber et al. : Examiner: RAMANA, ANURADHA

Application No.: 10/620,154 : Confirmation No.: 8486

Patent No. RE43,008 : Art Unit: 3775

Filing Date: July 15, 2003

For: ORTHOPEDIC IMPLANT ASSEMBLY

**REQUEST FOR CERTIFICATE OF CORRECTION OF
APPLICANT MISTAKE**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants request a Certificate of Correction under 37 CFR 1.323 for this patent for an error arising from an incorrect assignee's name being furnished. A form PTO/SB/44 is enclosed.

The error arose because in Applicant's Issue Fee Transmittal dated October 28, 2011, Applicant provided an incorrect Assignee's Name. The Issue Fee Transmittal filed on October 28, 2011 shows "Acantha, Inc." as the Assignee's Name. However, the correct Assignee's Name is "ACANTHA LLC". Please correct the Assignee's Name. The assignment from the inventors to ACANTHA LLC for US Patent 6261291 which was the predecessor to this reissue patent was recorded June 4, 2002 at Reel/Frame 012967/0893.

Together with this Request for Certificate of Correction under 37 CFR 1.323, Patent owner also submits a Request under 37 CFR 3.81 (b) for a patent to be corrected to state the name of the assignee.

The mistake was incurred through the fault of Applicant. Thus, the fee is enclosed. However, if any additional fee is deemed necessary, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 14-1437, Order No.9683.002.REUS00.

Date: June 5, 2014.

NOVAK DRUCE CONOLLY
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1875 Eye Street, NW, 11th Flr
Washington, D.C. 20006
Tel: 202.659.0100 / Fax: 202.659.0105
Customer No. 77213

Respectfully Submitted,

By: /anthony p venturino/
Anthony P. Venturino
Registration No. 31674

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : RE43,008

APPLICATION NO.: 10/620,154

ISSUE DATE : 12-06-2011

INVENTOR(S) : RAMANA, ANURADHA et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Patent First Page, Paragraph (73)

Change: "Assignee: Acantha, Inc." to --Assignee: ACANTHA LLC--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David J. Talaber et al. : Examiner: RAMANA, ANURADHA

Application No.: 10/620,154 : Confirmation No.: 8486

Patent No. RE43,008 : Art Unit: 3775

Filing Date: July 15, 2003

For: ORTHOPEDIC IMPLANT ASSEMBLY

REQUEST UNDER 37 CFR 3.81 (b) FOR A PATENT TO BE CORRECTED

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants request under 37 CFR 3.81 (b) for a patent to be corrected to state the correct name of the assignee.

The assignment was submitted for recordation as set forth in 37 CFR 3.11 before issuance of the patent. The assignment from the inventors to ACANTHA LLC for US Patent 6261291 which was the predecessor to this reissue patent was recorded June 4, 2002 at the Reel/Frame 012967/0893.

The processing fee required by 37 CFR 1.17 (i) is enclosed. However, if any additional fee is deemed necessary, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 14-1437, Order No.9683.002.REUS00.

Date: June 5, 2014.

NOVAK DRUCE CONOLLY
BOVE + QUIGG LLP
1875 Eye Street, NW, 11th Flr
Washington, D.C. 20006
Tel: 202.659.0100 / Fax: 202.659.0105
Customer No. 77213

Respectfully Submitted,

By: /anthony p venturino/
Anthony P. Venturino
Registration No. 31674

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

PROCESSING FEE
Under 37 CFR 1.17(i)
TRANSMITTAL

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents, P.O. Box 1450,
 Alexandria, VA 22313-1450

Application Number	10/620,154
Filing Date	2003-07-15
First Named Inventor	David J. Talaber
Art Unit	3775
Examiner Name	RAMANA, ANURADHA
Practitioner Docket No.	9683.002.REUS00

Enclosed is a paper filed under 37 CFR 3.81(b) that requires a processing fee (37 CFR 1.17(i)(1) or (2)).

Payment of \$ 140 is enclosed.

This form should be included with the above-mentioned paper and faxed or mailed to the Office using the appropriate Mail Stop, if applicable.
 For transmittal of petition fees under 37 CFR 1.17(f), (g) or (h), see form PTO/SB/17p.

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.

Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

Payment of Fees

☒ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 14-1437:

☐ processing fee under 37 CFR 1.17(i)(1) ☐ processing fee under 37 CFR 1.17(i)(2) ☒ any deficiency of fees and credit of any overpayments

☐ Check in the amount of \$ _____ is enclosed.

☒ Payment via EFS-Web.

☐ Payment by credit card (Form PTO-2038 or equivalent is enclosed). Do not provide credit card information on this form.

Processing Fees Under 37 CFR 1.17(i)(1):

Undiscounted Fee \$140 (Fee Code 1053) Small Entity Fee \$70 (Fee Code 2053) Micro Entity Fee \$35 (Fee Code 3053)

For papers filed under:

§ 1.28(c)(3) - for processing a nonitemized fee deficiency based on an error in small entity status.

§ 1.41 - for supplying the name or names of the inventor or inventors after the filing date without an oath or declaration as prescribed by § 1.63, except in provisional applications.

§ 1.48 - for correcting inventorship, except in provisional applications.

§ 1.52(d) - for processing a nonprovisional application filed with a specification in a language other than English.

§ 1.53(b)(3) - to convert a provisional application filed under § 1.53(c) into a nonprovisional application under § 1.53(b).

§ 1.55 - for entry of late priority papers.

§ 1.71(g)(2) - for processing a belated amendment under § 1.71(g).

§ 1.99(e) - for processing a belated submission under § 1.99.

§ 1.102(e) - for requesting prioritized examination of an application.

§ 1.103(b) - for requesting limited suspension of action, continued prosecution application for a design patent (§ 1.53(d)).

§ 1.103(c) - for requesting limited suspension of action, request for continued examination (§ 1.114).

§ 1.103(d) - for requesting deferred examination of an application.

§ 1.291(c)(5) - for processing a second or subsequent protest by the same real party in interest.

§ 1.497(d) - for filing an oath or declaration pursuant to 35 U.S.C. 371(c)(4) naming an inventive entity different from the inventive entity set forth in the international stage.

§ 3.81 - for a patent to issue to assignee, assignment submitted after payment of the issue fee.

Processing Fees Under 37 CFR 1.17(i)(2):

Fee \$130 (small and micro entity discounts are not available for the 37 CFR 1.17(i)(2) processing fee)

For papers filed under:

§ 1.217 - for processing a redacted copy of a paper submitted in the file of an application in which a redacted copy was submitted for the patent application publication. **FEE CODE 1808**

§ 1.221 - for requesting voluntary publication or republication of an application. **FEE CODE 1803**

SUBMITTED BY

Signature	/anthony p venturino/	Registration No. (Attorney/Agent) 31674	Telephone 2022041678
Name (Print/Type)	Anthony P. Venturino	Date 06/05/2014	

This collection of information is required by 37 CFR 1.17. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 5 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		10620154		
Filing Date:		15-Jul-2003		
Title of Invention:		ORTHOPEDIC IMPLANT ASSEMBLY		
First Named Inventor/Applicant Name:		David J. Talaber		
Filer:		Anthony Peter Venturino/Yayoi Bourne		
Attorney Docket Number:		9683.002.REUS00		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Certificate of Correction	1811	1	100	100

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				240

Electronic Acknowledgement Receipt

EFS ID:	19218458
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	77213
Filer:	Anthony Peter Venturino/Yayoi Bourne
Filer Authorized By:	Anthony Peter Venturino
Attorney Docket Number:	9683.002.REUS00
Receipt Date:	05-JUN-2014
Filing Date:	15-JUL-2003
Time Stamp:	11:22:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 240
RAM confirmation Number	7960
Deposit Account	141437
Authorized User	VENTURINO, ANTHONY

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	9683-002-REUS00-RCOC-ApplicantError.pdf	241425 dc13a9b07896583cf7bf8b38eeebb65170a330c3	no	4

Warnings:

Information:

2	Petition for review/processing depending on status	9683-002-REUS00-RequestUnder37CFR381_b.pdf	96285 23c520d0a37483edc4aeafeab4c2dde0e0a83e3	no	1

Warnings:

Information:

3	Transmittal Letter	9683-002-REUS00-sb0017i.pdf	242093 5da3e9f20fb0ca7d6abdc1557b6a98fe44a0d4b2	no	2

Warnings:

Information:

4	Fee Worksheet (SB06)	fee-info.pdf	32128 9db6474502c7344f4863c0064441696947b3c10e	no	2

Warnings:

Information:

Total Files Size (in bytes):	611931

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/620,154	07/15/2003	David J. Talaber	9683.002.REUS00

77213
Novak Druce + Quigg, LLP
300 New Jersey Ave, NW
Fifth Floor
Washington, DC 20001

CONFIRMATION NO. 8486
POA ACCEPTANCE LETTER



Date Mailed: 10/22/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/jtfitzhugh sr/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/620,154	07/15/2003	David J. Talaber	ACANP-00101

CONFIRMATION NO. 8486

POWER OF ATTORNEY NOTICE



90045
Edward J. Lynch
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

Date Mailed: 10/22/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/25/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/jtfitzhugh sr/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

"FEE ADDRESS" INDICATION FORM

Address to:
Mail Stop M Correspondence
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Fax to:
571-273-6500

- OR -

INSTRUCTIONS: The issue fee must have been paid for application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. **When to check the first box below:** If you have a Customer Number to represent the fee address. **When to check the second box below:** If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.

For the following listed application(s), please recognize as the "Fee Address" under the provisions of 37 CFR 1.363 the address associated with:



Customer Number:

77213

OR



The attached Request for Customer Number (PTO/SB/125) form.

PATENT NUMBER (if known)	APPLICATION NUMBER
Re 43008 E	10/620154

Completed by (check one):



Applicant/Inventor



Attorney or Agent of record

(Reg. No.)



Assignee of record of the entire interest. See 37 CFR 3.71.
 Statement under 37 CFR 3.73(b) is enclosed.
 (Form PTO/SB/96)

Assignee recorded at Reel 012967 Frame 0893

David J. Telaber
 Signature

David J. Telaber
 Typed or printed name

925-455-1547
 Requester's telephone number

9/25/12
 Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.



* Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.363. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 5 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND COMPLETE D FORMS TO THIS ADDRESS. SEND TO: Mail Stop M Correspondence, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	13836807
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90045
Filer:	Anthony Peter Venturino
Filer Authorized By:	
Attorney Docket Number:	ACANP-00101
Receipt Date:	25-SEP-2012
Filing Date:	15-JUL-2003
Time Stamp:	19:09:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73.	2012-09-25_19683-0002-REUS00_AssigneeStatement.pdf	243141 5252aadcbbf9ac7bb691d4fe19c4ffbd54ef14	no	1

Warnings:

Information:

2	Power of Attorney	2012-09-25_19683-0002-REUS00_Power.pdf	249915 5096f127b4b932b1806adf6afab68a55a77008d9	no	1
Warnings:					
Information:					
3	Change of Address	2012-09-25_19683-0002-REUS00_FeeAddress.pdf	261978 1f76d5f37eae52b3b3177357239b6a6c2794c922	no	1
Warnings:					
Information:					
Total Files Size (in bytes):			755034		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)Applicant/Patent Owner: Talaber et al.Application No./Patent No.: Re 43008 EFiled/Issue Date: Dec. 6, 2011Titled: Orthopedic Implant Device

Acantha LLC

, a limited liability company

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above, by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 012967, Frame 0893, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature

Date

Printed or Typed Name

Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Patent Number	Re 43008 E
	Issue Date	12/06/2011
	First Named Inventor	Talaber
	Title	Orthopedic Implant Assembly
	Attorney Docket Number	9683.002.REUS00

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

77213

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☐ The address associated with the above-mentioned Customer Number.

OR

☒ The address associated with Customer Number:

77213

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the:

☐ Inventor, having ownership of the patent.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____

SIGNATURE of Inventor or Patent Owner

Signature	<i>David J. Talaber</i>	Date	9/25/12
Name	David J. Talaber	Telephone	725-455-1547
Title and Company	Acantha, LLC managing member		

NOTE: Signatures of all the inventors or patent owners of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	12/06/2011	RE43008	ACANP-00101	8486

90045 7590 11/16/2011
Edward J. Lynch
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Extension or Adjustment under 35 U.S.C. 154 (b)

A reissue patent is for "the unexpired part of the term of the original patent." See 35 U.S.C. 251. Accordingly, the above-identified reissue application is not eligible for Patent Term Extension or Adjustment under 35 U.S.C. 154(b).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

David J. Talaber, Livermore, CA;
James R. Lloyd, Elm Grove, WI;

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

90045 7590 10/11/2011

Edward J. Lynch
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	ACANP-00101	8486

TITLE OF INVENTION: ORTHOPEDIC IMPLANT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$0	\$0	\$1740	01/11/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAMANA, ANURADHA	3775	606-289000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Edward J. Lynch

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Acantha, Inc.

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature Edward J. Lynch

Date October 28, 2011

Typed or printed name Edward J. Lynch

Registration No. 24422

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal				
Application Number:		10620154		
Filing Date:		15-Jul-2003		
Title of Invention:		ORTHOPEDIC IMPLANT ASSEMBLY		
First Named Inventor/Applicant Name:		David J. Talaber		
Filer:		Edward J. Lynch		
Attorney Docket Number:		ACANP-00101		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Reissue issue fee	1511	1	1740	1740
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				1740

Electronic Acknowledgement Receipt

EFS ID:	11290073
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90045
Filer:	Edward J. Lynch
Filer Authorized By:	
Attorney Docket Number:	ACANP-00101
Receipt Date:	28-OCT-2011
Filing Date:	15-JUL-2003
Time Stamp:	14:32:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1740
RAM confirmation Number	832
Deposit Account	504358
Authorized User	LYNCH,EDWARD J.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	noticeofallowance.pdf	74724 53719208db1371cb491f208c2e71372b45e2617c	no	1
Warnings: The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	29982 4d7641a86055366a90a8d86b86b549e3ee2aa93	no	2
Warnings: Information:					
Total Files Size (in bytes):			104706		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

90045 7590 10/11/2011
Edward J. Lynch
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3775

DATE MAILED: 10/11/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154

07/15/2003

David J. Talaber

ACANP-00101

8486

TITLE OF INVENTION: ORTHOPEDIC IMPLANT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$0	\$0	\$1740	01/11/2012

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

90045 7590 10/11/2011
 Edward J. Lynch
 Patent Attorney
 Four Embarcadero Center
 Suite 1700
 San Francisco, CA 94111

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154 07/15/2003 David J. Talaber ACANP-00101 8486

TITLE OF INVENTION: ORTHOPEDIC IMPLANT ASSEMBLY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$0	\$0	\$1740	01/11/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
RAMANA, ANURADHA	3775	606-289000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154

07/15/2003

David J. Talaber

ACANP-00101

8486

90045

7590

10/11/2011

Edward J. Lynch

Patent Attorney

Four Embarcadero Center

Suite 1700

San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3775

DATE MAILED: 10/11/2011

Determination of Patent Term Extension or Adjustment under 35 U.S.C. 154 (b)

A reissue patent is for "the unexpired part of the term of the original patent." See 35 U.S.C. 251. Accordingly, the above-identified reissue application is not eligible for Patent Term Extension or Adjustment under 35 U.S.C. 154(b).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	10/620,154	TALABER ET AL.	
	Examiner	Art Unit	
	Anu Ramana	3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 08/18/2011.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-28,30,31,33-35,37-40,42-60,63-79,84-86,88,90,91,93,95,98-102,105,106,108 and 111-126.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Notice of Informal Patent Application
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____.
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____	7. ☐ Examiner's Amendment/Comment
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. ☐ Examiner's Statement of Reasons for Allowance
	9. ☐ Other ____.

/Anu Ramana/
Primary Examiner, Art Unit 3775

September 23, 2011



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BIB DATA SHEET

CONFIRMATION NO. 8486

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
10/620,154	07/15/2003	606	3775	ACANP-00101		
RULE						
APPLICANTS David J. Talaber, Livermore, CA; James R. Lloyd, Elm Grove, WI; ** CONTINUING DATA ***** OK. AR. 9/23/2011. This application is a REI of 09/349,519 07/08/1999 PAT 6,261,291 ** FOREIGN APPLICATIONS ***** None. AR. 9/23/2011. ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 01/06/2004						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and Acknowledged <u>/ANU RAMANA/</u> Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 7	TOTAL CLAIMS ~~62~~ 105	INDEPENDENT CLAIMS ~~10~~ 13
ADDRESS Edward J. Lynch Patent Attorney Four Embarcadero Center Suite 1700 San Francisco, CA 94111 UNITED STATES						
TITLE ORTHOPEDIC IMPLANT ASSEMBLY						
FILING FEE RECEIVED 3203	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	0	((implant\$1 prosthesis\$2) same (bore\$1 opening \$1 hole\$1 passage \$4) same expand \$4 same (screw\$1 fasten\$3 secur\$3) same smaller same diameter\$1). clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 12:56
L3	0	((implant\$1 prosthesis\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same (bias\$3 elastic resilient) same (stop\$4 washer\$1) same (fasten\$3 screw\$1 secur\$3) same diameter\$1 same head\$1 same (greater larger) same second). clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 12:56
L4	0	((implant\$1 prosthesis\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same expand\$4 same (screw\$1 fasten\$3 secur\$3) same smaller same diameter\$1). clm.	US-PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 12:57

L5	1	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 passage \$4) same (expand \$4 compress\$4) same (screw\$1 fasten\$3 secur\$3) same smaller same diameter\$1). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 12:57
L7	7	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (uncompress \$2 expand\$4) same (screw\$1 fasten\$3 secur\$3) same head\$1). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 12:59
L8	0	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (uncompress \$2 expand\$4) same (screw\$1 fasten\$3 secur\$3) same (washer\$1 stop\$4) same head \$1 same (below between middle)). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 13:02

L9	2	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (screw\$1 fasten\$3 secur\$3) same (washer\$1 stop\$4) same head \$1 same (below between middle)). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 13:02
L10	1	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (screw\$1 fasten\$3 secur\$3) same (washer\$1 stop\$4) same head \$1 same first same second same (enlarg\$2 larger greater)). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 13:03
L11	0	((implant\$1 prothes\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (screw\$1 fasten\$3 secur\$3) same (washer\$1 stop\$4) same head \$1 same first same second same smaller). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2011/09/23 13:04

L12	0	((implant\$1 prosthesis\$2) same (bore\$1 opening \$1 hole\$1 recess \$2 passage\$4) same compress\$4 same (screw\$1 fasten\$3 secur\$3) same (washer\$1 stop\$4) same head \$1 same first same second same smaller). clm.	USPAT; UPAD	OR	OFF	2011/09/23 13:06

9/ 23/ 2011 1:07:05 PM

Search Notes 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Search.	3/9/2008	A.Ramana
Updated Search.	12/6/2009	A. Ramana
Updated Search.	8/8/2010	A. Ramana
Updated Search.	11/8/2010	A. Ramana
Conducted a litigation search. See the attached search report.	05/18/2011	A. Ramana
Updated search.	9/23/2011	A. Ramana

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
	Conducted an interference search. See the attached search report.	09/23/2011	A. Ramana

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

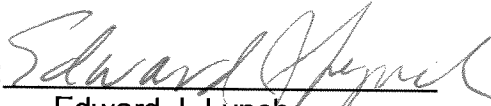
In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3775
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	Customer No.: 90045
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT ASSEMBLY	)	TRANSMITTAL
Filed: July 15, 2003	)	

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:
 X Supplemental Reissue Declaration
2. Payment of Fees
 X There is no fee due with this communication. However, the Commissioner is authorized to charge any fees, the deficiency in payment and/or to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
Patent Attorney
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Electronic Acknowledgement Receipt

EFS ID:	10812884
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90045
Filer:	Edward J. Lynch
Filer Authorized By:	
Attorney Docket Number:	ACANP-00101
Receipt Date:	25-AUG-2011
Filing Date:	15-JUL-2003
Time Stamp:	13:59:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Supp reissue dec filed in accord with MPEP 1414.01.	suppdecl.pdf	71430 db0111d2d92fea958e73af4f83360cce0b490fc3	no	3

Warnings:

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Information:

2	Transmittal Letter	transmittal.pdf	22001	no	1
			f917d4ee5289586159a5dc6726fa7e1e905c3c38		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3775
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	Customer No.: 90045
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT ASSEMBLY	)	SUPPLEMENTAL DECLARATION FOR REISSUE TO CORRECT "ERRORS" STATEMENT
Filed: July 15, 2003	)	

Mail Stop Reissue
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sirs:

We hereby declare that:

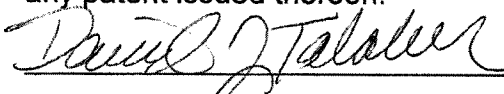
Every error in the patent which was corrected in the present reissue application, including the amendment filed on August 18, 2011 and which is not covered by the prior oath(s) and/or declaration(s) submitted in this application, arose without any deceptive intention on the part of the applicants.

We verily believe the original patent to be wholly or partly inoperative or invalid, by reason of the patentee claiming more or less than he had the right to claim in the patent.

The at least one error upon which the reissue is based and the nature of the broadening is as follows:

Originally issued claims 1-20 of U.S. Patent No. 6, 261,291 claimed less than patentees had a right to claim because claims 1-20 are directed to an orthopedic implant assembly that requires, inter alia, "a biased stopping member". New claim 63 is directed to an orthopedic implant assembly that includes a stopping member but the claim does not require the stopping member to be biased.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



David J. Talaber
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Date: 8/18/11

First Inventor

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Date: _____

Second Inventor

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Date: _____

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James R. Lloyd
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Date: August 19, 2011

Second Inventor

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3775
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	Customer No.: 90045
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT ASSEMBLY	)	AMENDMENT AND RESPONSE TO OFFICE ACTION MAILED 06/17/2011
Filed: July 15, 2003	)	

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Alexandria, VA 22313-1450

Dear Sirs:

In response to the Office Action mailed on June 17, 2011, please amend the above identified application as indicated below. A marked-up copy of the amended claims indicating the changes made thereto in this amendment is attached for the convenience of the Examiner.

The amended claim pages are pages 2-29

REMARKS can be found on pages 30-31.

IN THE CLAIMS:

Please amend claims 52, 63 and 115. Claim 1 has been corrected to indicate prior amendments. Amendments and correction are indicated below.

1. (Twice Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.
2. (Original) The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargeable from an unexpanded inner diameter to an expanded inner diameter, wherein the head of the securing element has a maximum diameter greater than the unexpanded inner diameter of the

collar and less than the expanded inner diameter of the collar.

3. (Original) The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.

4. (Original) The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.

5. (Original) The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

6. (Original) The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.

7. (Original) The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller

than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

8. (Original) The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.

9. (Original) The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

10. (Original) The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. (Original) The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. (Original) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. (Original) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

14. (Original) The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. (Original) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. (Original) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. (Original) The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. (Original) The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. (Original) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. (Original) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;
- b) providing a securing element having an elongated body, and a head at

one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;

- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

22. (Original) The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the

head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. (Original) An orthopedic implant assembly, comprising
- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface; and
 - b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element.
24. (Original) The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.
25. (Original) The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members; the

circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. (Original) The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. (Original) The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface;
- b) providing a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the

- head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Cancelled)

30. (Three Times Amended) The attachment assembly of claim 120 wherein the first configuration of the stopping member has inner transverse dimensions that are smaller than transverse dimensions of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and

the second configuration of the stopping member has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.

31. (Twice Amended) The attachment assembly of claim 120 wherein the securing element having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Pending) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Pending) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Pending) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Cancelled)

37. (Three Times Amended) The attachment assembly of claim 120 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension by the passage of the enlarged integral portion of the securing member therethrough.

38. (Pending) The attachment assembly of claim 37 wherein the bore has

a groove which receives the collar.

39. (Pending) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Pending) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Pending) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 120 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 120 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 120 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 120 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Pending) The attachment assembly of claim 31 wherein the securing

member is selected from the group consisting of screws and nails.

48. (Pending) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Pending) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Pending) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Pending) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Four Times Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion having a maximum transverse dimension,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than a transverse dimension of the anterior bore portion and smaller than the

maximum transverse dimension of the enlarged integral portion of the securing member, and

a stopping member which has a first configuration which allows passage of the enlarged integral portion of the securing member and has a second configuration that reduces a transverse dimension of the bore that is smaller than the maximum transverse dimension of the enlarged integral portion of the securing member in order to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member wherein the stopping member has an anterior surface and a posterior surface;

b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone; and

c) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member thereby displacing the stopping member to the first configuration and is disposed in the posterior bore portion, the stopping member then returning to the second configuration to retain the enlarged integral portion within the posterior bore portion; and wherein the enlarged integral portion of the securing member is retained within the posterior bore portion below the posterior surface of the stopping member.

53. (Pending) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member

may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Twice Amended) An orthopedic implant assembly, comprising:

a) a securing element with an elongated body and an enlarged head;

b) an attachment member comprising

an attachment component which has at least one bore configured to receive the securing element, the bore having a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion;

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of the securing element within the bore of the attachment member between the stopping surface and the second bore portion, and

a third bore portion between the stopping surface and the second bore portion having a surface configured to conform at least in part to part of the enlarged head of the securing element received by the bore; and

c) the enlarged head of the securing element having a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed at least in part by the stopping surface and having an uncompressed configuration with a transverse dimension greater than the reduced

transverse configuration of the first bore portion and the second bore portion, so that the head of the securing element is retained within the bore between the stopping surface and the second bore portion in the attachment component.

55. (Pending) The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. (Pending) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (Pending) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (Pending) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Pending) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
an attachment component which has at least one bore configured to
receive a securing element with an enlarged head, the bore having

a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion,

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

b) positioning the attachment member against a surface of the patient's bone;

c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within the second bore portion in the attachment component; and

d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Amended) The attachment assembly of claim 120, wherein

a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and

b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Four Times Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion with a transverse dimension and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing element disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration and smaller than the maximum transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing element

within the posterior bore portion of the stabilizing element; and wherein the enlarged integral portion of the securing element is retained below the posterior surface of the stopping member.

64. (Pending) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Twice Amended) The assembly of claim 63 wherein the stopping member is biased to the second configuration.

66. (Pending) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Pending) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Pending) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Twice Amended) The assembly of claim 69 wherein the curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the

collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Pending) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Pending) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Pending) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

75. (Pending) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (Pending) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (Pending) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Pending) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Pending) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Pending) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,
- b. a stopping member at the anterior portion of the bore; and
- c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (Pending) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (Pending) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. (Pending) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Cancelled)

90. (Amended) The assembly of claim 120 wherein the stopping element comprises a biased collar.

91. (Thrice Amended) The assembly of claim 90 wherein the biased collar is elastically deformable to the second configuration.

92. (Cancelled)

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element.

94. (Cancelled)

95. (Three Times Amended) The orthopedic implant assembly of claim 121 wherein the biased enlarged portion of the securing element comprises at least one resilient member that deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Cancelled)

97. (Cancelled)

98. (Three Times Amended) The orthopedic implant assembly of claim 125 wherein the biased stopping member elastically returns from the first configuration back to the second configuration.

99. (Amended) The assembly of claim 125 wherein the biased stopping member comprises a collar.

100. (Pending) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

101. (Pending) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Three Times Amended) The attachment assembly of claim 120, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

103. (Cancelled)

104. (Cancelled)

105. (Amended) The attachment assembly of claim 120 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Pending) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (Cancelled)

108. (Amended) The assembly of claim 121 wherein the biased enlarged portion of the securing element comprises a biased collar.

109. (Cancelled)

110. (Cancelled)

111. (Amended) The assembly of claim 121 wherein the compressible part of the enlarged portion of the securing element comprises at least one circumferentially disposed member.

112. (Amended) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the shaft of the securing element.

113. (Amended) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the shaft of the securing element.

114. (Amended) The orthopedic attachment assembly of claim 120 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing element so that the enlarged integral portion of the securing element is longitudinally displaceable within the posterior bore portion when retained therein.

115. (Twice Amended) The orthopedic attachment assembly of claim 120 wherein,

a. the elongated securing element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a

shaft extending from the enlarged integral portion configured to be secured within bone;

- b. the attachment element has an anterior surface and a posterior surface and has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to retain the enlarged integral portion of the securing element within the posterior bore portion; and
- c. the stopping member defines in part a passageway in the posterior bore portion, said posterior bore portion being longer than the length of the enlarged integral portion of the securing element to allow longitudinal displacement of the enlarged integral portion of the securing element within the posterior bore portion.

116. (Twice Amended) The orthopedic attachment assembly of claim 115 wherein the securing element has a portion posterior to the enlarged integral portion that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing element within the posterior bore portion.

117. (Amended) The orthopedic attachment assembly of claim 115 wherein the second configuration of the stopping member has a transverse dimension that is

larger than the transverse dimension of the stopping member in the first configuration.

118. (Amended) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing element has a maximum transverse dimension which is greater than the second transverse dimension of the stopping member.

119. (Amended) The orthopedic attachment assembly of claim 118 wherein the enlarged integral portion of the securing element has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.

120. (Pending) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to

a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral portion into the posterior bore portion, the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

121. (Pending) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having a biased enlarged portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the biased enlarged portion of the securing member to facilitate retention of the enlarged portion of the securing member within the posterior bore portion; and
- c. a stopping member which has an anterior surface, and a posterior stopping surface which extends within the bore;
- d. the biased enlarged portion of the securing member is elastically

deformed from a first configuration to a second configuration as the biased enlarged portion passes the stopping member during the passage of the biased enlarged portion of the securing member into the posterior bore portion of the attachment member, the biased enlarged portion of the securing member returning to the first configuration after passage of the biased enlarged portion into the posterior bore portion of the attachment member, engagement of the posterior stopping surface of the stopping member with the anterior surface of the biased enlarged portion of the securing member facilitating retention of the biased enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

122. (Twice Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element; and
- c. a plurality of biased stopping members that are part of the attachment

member, each of said stopping members having a posterior stopping surface, a first configuration wherein the stopping members extend within the bore and wherein the stopping members are elastically deformed by the passage of the enlarged portion of the securing element to a second configuration to allow passage of the enlarged portion of the securing element into the posterior bore portion, the biased stopping members returning to the first configuration upon passage of the enlarged portion and the posterior stopping surfaces configured to engage the anterior surface of the securing element facilitating retention of the enlarged integral portion of the securing element within the posterior bore portion of the attachment member.

123. (Amended) The orthopedic implant assembly of claim 122 wherein the biased stopping members are contractible fingers.

124. (Pending) The orthopedic implant assembly of claim 122 wherein the plurality of biased stopping members comprise resilient longitudinally deflectable members which have first un-deflected configurations within the anterior bore portion and deflected configurations which allow the enlarged integral portion of the securing element to pass into the posterior bore portion, the one or more deflectable members having posterior surfaces that are configured to engage an anterior surface of the enlarged integral portion of the securing element to prevent the back-out of the enlarged integral head of the securing element from the posterior bore of the stabilizing element and facilitate retention of the enlarged integral head of securing element within the posterior bore portion.

125. (Pending) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a securing element having an elongated body and an enlarged integral portion having an anterior surface; and
- c. a biased stopping member which has a posterior stopping surface, which has a first configuration within the anterior bore portion that has a first transverse dimension and is elastically deformable to a second configuration within the anterior bore portion that has a second transverse dimension larger than the first transverse dimension that allows the enlarged integral portion of the securing element to pass into the posterior bore portion posterior to the biased stopping member, the biased stopping member returning to the first configuration so that the posterior surface of the stopping member is positioned to engage the anterior surface of the securing element and prevents the securing element from backing out of the posterior bore portion and to facilitate retention of the enlarged integral portion of the securing element within the posterior bore portion.

126. (Amended) The assembly of claim 120 wherein the posterior stopping surface of the stopping member is perpendicular to the longitudinal axis of the bore.

REMARKS

Amendments to Claim 1

The Examiner indicated that claim 1 was not in proper reissue claim formatting. Applicants have added the amendments previously made to claim 1 to put the claim in proper reissue amended claim format as shown in MPEP 1453 (V.)(E).

Response to Claim Objections and Rejections Under 35 U.S.C. §112(2)

Claims 52, 63 and 115 were objected to and rejected by the Examiner for indefiniteness. Applicants have amended these claims as suggested by the Examiner.

Reissue Oath/Declaration

The Examiner has indicated that the oath/declaration filed with the present application is now defective because it refers to claim 29 which was been cancelled subsequent to the date of the declaration. Applicants will file a supplemental reissue declaration in due course addressing the deficiencies referred to. The original reissue declaration referred to the nature of the broadening as the original claims calling for a biased stopping member and indicated that the then new claim 29 did not include the limitation that the stopping member be biased. Claim 29 was cancelled subsequent to the original reissue declaration, but the nature of the claim broadening remains the same, namely, that the stopping member does not include the limitation of being biased. See for example claim 63 which calls for a stopping member but does not require the stopping member to be biased. See also claim 52 which also does not call for the stopping member to be biased.

Conclusions

In view of the amendments made to the above claims, applicants believe that the pending claims are in condition for allowance. A new reissue declaration will be filed in due course. Reconsideration and an early allowance are requested.

Respectfully submitted:

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MARK-UP OF AMENDED CLAIMS

52. (Four Times Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion having a maximum transverse dimension,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than a transverse dimension of the anterior bore portion and smaller than the maximum transverse dimension of the enlarged integral portion of the securing member, and

a stopping member which has a first configuration which allows passage of the enlarged integral portion of the securing member and has a second configuration that reduces a transverse dimension of the bore that is smaller than the maximum transverse dimension of the enlarged integral portion of the securing member in order to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member wherein the stopping member has an anterior surface and a posterior surface;

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone; and
- c) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member thereby displacing the stopping member to the first configuration and is disposed in the posterior bore portion, the stopping member then returning to the second configuration to retain the enlarged integral portion within the posterior bore portion [and to facilitate longitudinal movement of]; and wherein the enlarged integral portion of the securing member is retained within the posterior bore portion below the posterior surface of the stopping member.

63. (Five Times Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion with a transverse dimension and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension; and
- c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration

within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing element disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration and smaller than the maximum transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing element within the posterior bore portion of the stabilizing element [and to facilitate longitudinal movement of]; and wherein the enlarged integral portion of the securing element is retained below the posterior surface of the stopping member [the enlarged integral portion of the securing element within the posterior bore portion].

115. (Three Times Amended) The orthopedic attachment assembly of claim 120 wherein,

- a. the elongated securing element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;
- b. the attachment element has an anterior surface and a posterior surface and has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element

to retain the enlarged integral portion of the securing element within the posterior bore portion; and

- c. the stopping member defines [at least] in part a passageway in the posterior bore portion, said posterior bore portion being longer than the length of the enlarged integral portion of the securing element to allow longitudinal displacement of the enlarged integral portion of the securing element within the posterior bore portion.

Electronic Acknowledgement Receipt

EFS ID:	10766393
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	ORTHOPEDIC IMPLANT ASSEMBLY
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90045
Filer:	Edward J. Lynch
Filer Authorized By:	
Attorney Docket Number:	ACANP-00101
Receipt Date:	18-AUG-2011
Filing Date:	15-JUL-2003
Time Stamp:	15:22:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	Transmittal.pdf	31231 d2d38476743446eac2391c5df377f0b5c18850f8	no	1

Warnings:

The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing

Information:

2	Amendment/Req. Reconsideration-After Non-Final Reject	Amendment.pdf	827424	no	35
			735a0b853c40153b13ad21d87650d5e6e88dbb5a		

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Information:

Total Files Size (in bytes):			858655

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3775
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	Customer No.: 90045
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT	)	
ASSEMBLY	)	TRANSMITTAL
Filed: July 15, 2003	)	

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

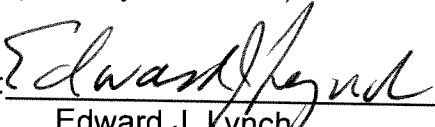
Dear Sir:

- Transmitted herewith for filing in the above-identified patent application are:
☒ Amendment And Response To Office Action Mailed 06/17/2011;
☒ Mark-Up Of Amended Claims; and
- Fees due
☒ No additional claim fee is required.

Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	2201	13 – 16 =	0 x	\$110. =	-0-
Total Claims	2202	102 – 108 =	0 x	\$26.=	-0-

- Payment of Fees
☒ There is no fee due with this communication. However, the Commissioner is authorized to charge any fees, the deficiency in payment and/or to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/620,154		Filing Date 07/15/2003		☒ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)			SMALL ENTITY ☐ OR		OTHER THAN SMALL ENTITY		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$	=	OR	X \$	=			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL				
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	08/18/2011	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 103	Minus	** 108	= 0	X \$	=	OR	X \$52=	0
	Independent (37 CFR 1.16(h))	* 10	Minus	***16	= 0	X \$	=	OR	X \$220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0	
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$	=	OR	X \$	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$	=	OR	X \$	=
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/MONICA FRANCIS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154

07/15/2003

David J. Talaber

ACANP-00101

8486

90045

7590

06/17/2011

Edward J. Lynch
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3775

MAIL DATE

DELIVERY MODE

06/17/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,154	TALABER ET AL.	
	Examiner	Art Unit	
	Anu Ramana	3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☒ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. <u>20110601</u> .
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)	5) ☐ Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1-28,30,31,33-35,37-40,42-60,63-79,84-86,88,90,91,93,95,98-102,105,106,108 and 111-126.

Continuation of Disposition of Claims: Claims rejected are 1-28,30,31,33-35,37-40,42-60,63-79,84-86,88,90,91,93,95,98-102,105,106,108 and 111-126.

Interview Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3775	

All participants (applicant, applicant's representative, PTO personnel):

(1) Edward J. Lynch. (3) ____.

(2) Anu Ramana. (4) ____.

Date of Interview: 08 November 2010.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: ____.

Claim(s) discussed: 52,63 and 115.

Identification of prior art discussed: None.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Minor amendments to the above-referenced claims were discussed and agreed upon in order to overcome potential rejections under 35 USC 112. Please refer to the attached Office Action for details.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Anu Ramana/ Primary Examiner, Art Unit 3775	08 November 2010

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

DETAILED ACTION

Oath/Declaration

The reissue oath/declaration filed with this application is defective because the error which is relied upon to support the reissue application is not an error upon which a reissue can be based. See 37 CFR 1.175(a)(1) and MPEP § 1414.

Applicant's declaration is no longer sufficient in that the error statement is no longer valid. Applicants refer to claim 29 in the previous declarations but claim 29 is no longer present in the claims since it has been canceled.

The reissue oath/declaration filed with this application is defective because it fails to contain a statement that all errors which are being corrected in the reissue application up to the time of filing of the oath/declaration arose without any deceptive intention on the part of the applicant. See 37 CFR 1.175 and MPEP § 1414.

Applicants have made numerous amendments to the claims since the filing of the last declaration. Therefore, Applicants must state that all errors being corrected and not covered by a previous declaration, arose without deceptive intent.

Claim Amendments

The pending claims in the instant application are not in proper format. Claim 1 is listed as "Twice Amended" in the response filed on August 17, 2010. However, a marked-up version of the claim has not been provided to show the changes made from the original patent claim. Applicants must supply a new set of claims that are in proper reissue claim formatting.

Claim Rejections - 35 USC § 251

Claims 1-28, 30-31, 33-35, 37-40, 42-60, 63-79, 84-86, 88, 90-91, 93, 95, 98-102, 105-106, 108 and 111-126 are rejected as being based upon a defective reissue oath under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the oath is set forth in the discussion above in this Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52-53, 63-73 and 115-119 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 52, the recitation "to facilitate longitudinal movement of the enlarged integral portion of the securing member within the posterior bore portion" renders the claim vague and indefinite since the functional recitation is not supported by recitation of adequate structure in the claim.

In claim 63, the recitation "to facilitate longitudinal movement of the enlarged integral portion of the securing element within the posterior bore portion" renders the claim vague and indefinite since the functional recitation is not supported by recitation of adequate structure in the claim.

In claim 115, the recitation "defines at least in part the posterior bore portion" renders the claim vague and indefinite since the structure being recited is unclear. The stopping member defines a passageway that is located within the posterior bore portion.

Appropriate correction is required.

As discussed during the phone interview conducted on November 8, 2010, if Applicant were to make the following amendments to the claims, the Examiner would withdraw the rejections under 35 USC 112 second paragraph.

In the claims (see the clean version of claims dated August 17, 2010):

In claim 52, line 21: immediately after "member" and immediately before ";" insert - - wherein the stopping member has an anterior surface and a posterior surface - - to clarify Applicant's invention.

In claim 52, line 30: immediately after "portion" delete the phrase "and to facilitate longitudinal movement of" and insert instead - - ; and wherein - - to better define Applicant's invention.

In claim 52, line 31: immediately after "member" and immediately before "within" insert - - is retained - - to better define Applicant's invention.

In claim 52, line 32: immediately after "portion" and immediately before "." insert - - below the posterior surface of the stopping member. - - to better define Applicant's invention.

In claim 63, line 18: delete the phrase "and to facilitate longitudinal" and insert instead - - ; and wherein the enlarged integral portion of the securing element is retained below the posterior surface of the stopping member. - - to better define Applicant's invention.

In claim 63, delete lines 19 and 20.

In claim 115, line 16, item "c." delete "at least" and further in the same line, immediately after "part" and immediately before "the (second occurrence)" insert - - a passageway in - - to better define Applicant's invention.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571)272-

Art Unit: 3775

4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached at (571) 272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR

June 2, 2011

/Anu Ramana/

Primary Examiner, Art Unit 3775

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	0	((plate\$1 stabiliz \$3) same (bore \$1 passage\$3 channel\$1) same (bias\$3 spring) same expand\$4 same (secur\$3 fasten \$3 screw\$1) same head\$1 same maximum same diameter same smaller). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:23
L4	9	((plate\$1 stabiliz \$3) same (bore \$1 passage\$3 channel\$1) same (secur\$3 fasten\$3 screw \$1) same head \$1 same (compress\$4 expand\$4) same diameter \$1 same less). clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:26

L5	1	((plate\$1 stabiliz \$3) same (bore \$1 passage\$3 channel\$1) same (secur\$3 fasten\$3 screw \$1) same head \$1 same (compress\$4 expand\$4) same reversib \$2 same diameter\$1 same less).clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:28
L6	0	((plate\$1 stabiliz \$3 attach\$4) same (bore\$1 passage\$3 channel\$1) same (transverse width\$1) same dimension\$1 same smaller same stop\$3 same (head\$1 enlarg\$2) same below).clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:31
L7	0	((plate\$1 stabiliz \$3 attach\$4) same (bore\$1 passage\$3 channel\$1) same (transverse width\$1) same dimension\$1 same greater same inner same stop\$3 same (head\$1 enlarg\$2)).clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:38

L11	4	((plate\$1 stabiliz \$3 attach\$4) same (bore\$1 passage\$3 channel\$1) same (bias\$2 spring\$1) same (member\$1 part \$1 portion\$1) same (secur\$3 fasten\$3 screw \$1) same smaller same (width\$1 dimension\$1) same (enlarg\$2 head\$1)).clm.	US- PGPUB; USPAT; UPAD	OR	OFF	2010/12/10 00:48

12/ 10/ 2010 12:50:30 AM

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3775

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA										☐ T.D.										☐ R.1.47									
CLAIM		DATE																																					
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010	06/02/2011																																
	1	=		✓	✓	=	✓																																
	2	=		✓	✓	=	✓																																
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	34			✓	✓	O	✓																																
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	36			✓	✓	-	-																																

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3775

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
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CLAIM		DATE																																					
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010	06/02/2011																																
	37			✓	✓	=	✓																																
	38			✓	✓	=	✓																																
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	71			✓	✓	O	✓																																
	72			✓	✓	O	✓																																

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
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CLAIM		DATE																																					
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010	06/02/2011																																
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	74			✓	✓	=	✓																																
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	107			=	=	-	-																																
	108			=	=	=	✓																																

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3775

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010	06/02/2011			
	109			=	=	-	-			
	110			=	=	-	-			
	111			=	=	=	✓			
	112			=	=	=	✓			
	113			=	=	=	✓			
	114			✓	✓	=	✓			
	115				✓	✓	✓			
	116				✓	✓	✓			
	117				✓	✓	✓			
	118				✓	✓	✓			
	119				✓	✓	✓			
	120					=	✓			
	121					=	✓			
	122					✓	✓			
	123					✓	✓			
	124					✓	✓			
	125					=	✓			
	126					✓	✓			

Search Notes 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Search.	3/9/2008	A. Ramana
Updated Search.	12/6/2009	A. Ramana
Updated Search.	8/8/2010	A. Ramana
Updated Search.	11/8/2010	A. Ramana
Conducted a litigation search. See the attached search report.		A. Ramana

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
	Conducted an interference search. See the attached search report.	12/7/2010	A. Ramana

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To: ANU RAMANA
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Art Unit: 3775
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Case Serial Number: 10/620154

From: TERRENCE SOLOMON
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RND-8B31
Phone: (571)272-3509

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Search Notes

US 6261291 was not involved in any federal court cases.

Sources:

- Lexis (0)
- Courtlink (0)
- Dialog (0)

349519 (09) 6261291 July 17, 2001

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6261291

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Link to Claims Section

July 17, 2001

Orthopedic implant assembly

REISSUE: July 15, 2003 - Reissue Application filed Ex. Gp.: 3731; Re. S.N. 10/620,154 (O.G. September 30, 2003)

APPL-NO: 349519 (09)

FILED-DATE: July 8, 1999

GRANTED-DATE: July 17, 2001

ASSIGNEE-AFTER-ISSUE: June 4, 2002 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., ACANTHA LLC 5185 CHARLOTTE WAYLIVERMORE, CALIFORNIA, 94550, Reel and Frame Number: 012967/0893

LEGAL-REP: Heller Ehrman White & McAuliffe LLP

PRIM-EXMR: Buiz, Michael

ASST-EXMR: Lewis, William

CORE TERMS: securing, passageway, stabilizing, transverse, stopping, bone, collar, posterior, anterior, implant, posteriorly, groove, orthopedic, unexpanded, displaced, biased, configured, curved, reversibly, compressed, patient, smaller, attach, screw, backing, circumferentially, uncompressed, displaceable, longitudinal, deflectable

Source: **Legal > / . . . / > Utility, Design and Plant Patents** 

Terms: **patno=6261291** (Edit Search | Suggest Terms for My Search)

View: Custom

Segments: Assignee, Asst-exmr, At-issue, Certcorr, Date, Exmr, Filed, Legal-rep, Lit-reex, Patno, Prim-exmr, Reex-cert, Reissue, Title

Date/Time: Wednesday, May 18, 2011 - 9:01 AM EDT

In

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Patent Search 6,261,291 5/18/2011

No cases found.

123: CLAIMS(R)/Current Legal Status_1980-2011/Apr 19
1 PN=US 6261291

670: LitAlert_1973-2011/UD=201112
0 PN=US 6261291

TOTAL: FILES 123,670
S1 1 PN=US 6261291

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1/7/1 (Item 1 from file: 123)
DIALOG(R)File 123: CLAIMS(R)/Current Legal Status
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3543084

Status Changes: • **REASSIGNED** • **REISSUE REQUESTED**

Assignee: Lloyd, James R; Talaber, David J (REASSIGNED)

Patent Number: **US 6261291** Issue Date: **20010717**

Reissue Request

Request Number	Request Date	O.G. Date	Examination Group	Reissue Patent No.
10/620154	20030715	20030930	3731	

Reassignment(s):

1. Recorded: 20020604

Action: ASSIGNMENT OF ASSIGNORS INTEREST

Assignor: TALABER, DAVID J. DATE SIGNED: 05/09/2002

LLOYD, JAMES R. DATE SIGNED: 05/12/2002

Assignee: ACANTHA LLC 5185 CHARLOTTE WAY LIVERMORE CALIFORNIA 94550

Reel: 012967

Frame: 0893

Contact: COUDERT BROTHERS LLP EDWARD J. LYNCH 600 BEACH STREET 3RD
FLOOR SAN FRANCISCO, CA 94109

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
	)	
Patent No.: 6,261,291	)	Group Art Unit: 3775
	)	
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
	)	
Inventors: Talaber et al.	)	Customer No.: 90045
	)	
Reissue Serial No.: 10/620,154	)	
	)	
For: ORTHOPEDIC IMPLANT	)	AMENDMENT AND RESPONSE TO
ASSEMBLY	)	OFFICE ACTION MAILED
	)	08/10/2010
	)	
Filed: July 15, 2003	)	

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In response to the Office Action mailed on August 10, 2010, please replace the amended claim pages with the following new claim pages. A marked-up copy of the amended claims indicating the changes made thereto is attached for the convenience of the Examiner.

IN THE CLAIMS:

Please amend claims 31, 52, 63, 115, 116, 118, 119, 122, 123, 124 and 126 as indicated below.

1. (Twice Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the stopping member and the second opening in the stabilizing element.
2. (Original) The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargeable from an unexpanded inner diameter to an expanded inner diameter, wherein the head of the securing element has a maximum diameter greater than the unexpanded inner diameter of the

collar and less than the expanded inner diameter of the collar.

3. (Original) The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.

4. (Original) The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.

5. (Original) The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

6. (Original) The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.

7. (Original) The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller

than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

8. (Original) The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.

9. (Original) The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

10. (Original) The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. (Original) The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. (Original) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. (Original) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

14. (Original) The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. (Original) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. (Original) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. (Original) The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. (Original) The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. (Original) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. (Original) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;
- b) providing a securing element having an elongated body, and a head at

one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;

- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

22. (Original) The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the

head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. (Original) An orthopedic implant assembly, comprising

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface; and
- b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element.

24. (Original) The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

25. (Original) The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members; the

circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. (Original) The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. (Original) The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface;
- b) providing a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the

head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element;

- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Cancelled)

30. (Thrice Amended) The attachment assembly of claim 120 wherein the first configuration of the stopping member has inner transverse dimensions that are smaller than transverse dimensions of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and

the second configuration of the stopping member has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.

31. (Twice Amended) The attachment assembly of claim 120 wherein the securing element having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Pending) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Pending) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Pending) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Cancelled)

37. (Thrice Amended) The attachment assembly of claim 120 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension by the passage of the enlarged integral portion of the securing member therethrough.

38. (Pending) The attachment assembly of claim 37 wherein the bore has

a groove which receives the collar.

39. (Pending) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Pending) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Pending) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 120 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 120 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 120 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 120 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Pending) The attachment assembly of claim 31 wherein the securing

member is selected from the group consisting of screws and nails.

48. (Pending) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Pending) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Pending) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Pending) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Three Times Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion having a maximum transverse dimension,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than a transverse dimension of the anterior bore portion and smaller than the

maximum transverse dimension of the enlarged integral portion of the securing member, and

a stopping member which has a first configuration which allows passage of the enlarged integral portion of the securing member and has a second configuration that reduces a transverse dimension of the bore that is smaller than the maximum transverse dimension of the enlarged integral portion of the securing member in order to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone; and

c) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member thereby displacing the stopping member to the first configuration and is disposed in the posterior bore portion, the stopping member then returning to the second configuration to retain the enlarged integral portion within the posterior bore portion and to facilitate longitudinal movement of the enlarged integral portion of the securing member within the posterior bore portion.

53. (Pending) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member may be secured within the patient's bone at an angle relative to a longitudinal axis of the

bore.

54. (Twice Amended) An orthopedic implant assembly, comprising:

a) a securing element with an elongated body and an enlarged head;

b) an attachment member comprising

an attachment component which has at least one bore configured

to receive the securing element, the bore having a first bore

portion, and a second bore portion having at least one

smaller transverse dimension than transverse dimensions of

the first bore portion;

a stopping surface which reduces a transverse configuration of the

first bore portion to retain the enlarged head of the securing

element within the bore of the attachment member between

the stopping surface and the second bore portion, and

a third bore portion between the stopping surface and the second

bore portion having a surface configured to conform at least

in part to part of the enlarged head of the securing element

received by the bore; and

c) the enlarged head of the securing element having a reversibly

compressed configuration with transverse dimensions less than the

reduced transverse configuration of the first bore portion formed at

least in part by the stopping surface and having an uncompressed

configuration with a transverse dimension greater than the reduced

transverse configuration of the first bore portion and the second

bore portion, so that the head of the securing element is retained within the bore between the stopping surface and the second bore portion in the attachment component.

55. (Pending) The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. (Pending) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (Pending) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (Pending) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Pending) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
 - an attachment component which has at least one bore configured to
 - receive a securing element with an enlarged head, the bore having
 - a first bore portion, and a second bore portion having at least one

smaller transverse dimension than transverse dimensions of the first bore portion,

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

b) positioning the attachment member against a surface of the patient's bone;

c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within the second bore portion in the attachment component; and

d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Amended) The attachment assembly of claim 120, wherein

a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and

b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Four Times Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion with a transverse dimension and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing element disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration and smaller than the maximum transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member

within the posterior bore portion of the stabilizing element and to facilitate longitudinal movement of the enlarged integral portion of the securing element within the posterior bore portion.

64. (Pending) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Twice Amended) The assembly of claim 63 wherein the stopping member is biased to the second configuration.

66. (Pending) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Pending) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Pending) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Twice Amended) The assembly of claim 69 wherein the curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the

collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Pending) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Pending) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Pending) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

75. (Pending) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (Pending) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (Pending) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Pending) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Pending) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Pending) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,

b. a stopping member at the anterior portion of the bore; and

c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (Pending) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (Pending) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. (Pending) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Cancelled)

90. (Amended) The assembly of claim 120 wherein the stopping element comprises a biased collar.

91. (Thrice Amended) The assembly of claim 90 wherein the biased collar is elastically deformable to the second configuration.

92. (Cancelled)

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element.

94. (Cancelled)

95. (Thrice Amended) The orthopedic implant assembly of claim 121 wherein the biased enlarged portion of the securing element comprises at least one resilient [longitudinally deflectable] member that deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Cancelled)

97. (Cancelled)

98. (Thrice Amended) The orthopedic implant assembly of claim 125 wherein the biased stopping member elastically returns from the first configuration back to the second configuration.

99. (Amended) The assembly of claim 125 wherein the biased stopping member comprises a collar.

100. (Pending) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

101. (Pending) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Thrice Amended) The attachment assembly of claim 120, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

103. (Cancelled)

104. (Cancelled)

105. (Amended) The attachment assembly of claim 120 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Pending) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (Cancelled)

108. (Amended) The assembly of claim 121 wherein the biased enlarged portion of the securing element comprises a biased collar.

109. (Cancelled)

110. (Cancelled)

111. (Amended) The assembly of claim 121 wherein the compressible part of the enlarged portion of the securing element comprises at least one circumferentially disposed member.

112. (Amended) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the shaft of the securing element.

113. (Amended) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the shaft of the securing element.

114. (Amended) The orthopedic attachment assembly of claim 120 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing element so that the enlarged integral portion of the securing element is longitudinally displaceable within the posterior bore portion when retained therein.

115. (Twice Amended) The orthopedic attachment assembly of claim 120 wherein,

a. the elongated securing element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a

shaft extending from the enlarged integral portion configured to be secured within bone;

- b. the attachment element has an anterior surface and a posterior surface and has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to retain the enlarged integral portion of the securing element within the posterior bore portion; and
- c. the stopping member defines at least in part the posterior bore portion, said posterior bore portion being longer than the length of the enlarged integral portion of the securing element to allow longitudinal displacement of the enlarged integral portion of the securing element within the posterior bore portion.

116. (Twice Amended) The orthopedic attachment assembly of claim 115 wherein the securing element has a portion posterior to the enlarged integral portion that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing element within the posterior bore portion.

117. (Amended) The orthopedic attachment assembly of claim 115 wherein the second configuration of the stopping member has a transverse dimension that is

larger than the transverse dimension of the stopping member in the first configuration.

118. (Amended) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing element has a maximum transverse dimension which is greater than the second transverse dimension of the stopping member.

119. (Amended) The orthopedic attachment assembly of claim 118 wherein the enlarged integral portion of the securing element has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.

120. (Pending) An orthopedic attachment assembly, comprising:

a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;

b. an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and

c. a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to

a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral portion into the posterior bore portion, the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

121. (Pending) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having a biased enlarged portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the biased enlarged portion of the securing member to facilitate retention of the enlarged portion of the securing member within the posterior bore portion; and
- c. a stopping member which has an anterior surface, and a posterior stopping surface which extends within the bore;
- d. the biased enlarged portion of the securing member is elastically

deformed from a first configuration to a second configuration as the biased enlarged portion passes the stopping member during the passage of the biased enlarged portion of the securing member into the posterior bore portion of the attachment member, the biased enlarged portion of the securing member returning to the first configuration after passage of the biased enlarged portion into the posterior bore portion of the attachment member, engagement of the posterior stopping surface of the stopping member with the anterior surface of the biased enlarged portion of the securing member facilitating retention of the biased enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

122. (Twice Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element; and
- c. a plurality of biased stopping members that are part of the attachment

member, each of said stopping members having a posterior stopping surface, a first configuration wherein the stopping members extend within the bore and wherein the stopping members are elastically deformed by the passage of the enlarged portion of the securing element to a second configuration to allow passage of the enlarged portion of the securing element into the posterior bore portion, the biased stopping members returning to the first configuration upon passage of the enlarged portion and the posterior stopping surfaces configured to engage the anterior surface of the securing element facilitating retention of the enlarged integral portion of the securing element within the posterior bore portion of the attachment member.

123. (Amended) The orthopedic implant assembly of claim 122 wherein the biased stopping members are contractible fingers.

124. (Pending) The orthopedic implant assembly of claim 122 wherein the plurality of biased stopping members comprise resilient longitudinally deflectable members which have first un-deflected configurations within the anterior bore portion and deflected configurations which allow the enlarged integral portion of the securing element to pass into the posterior bore portion, the one or more deflectable members having posterior surfaces that are configured to engage an anterior surface of the enlarged integral portion of the securing element to prevent the back-out of the enlarged integral head of the securing element from the posterior bore of the stabilizing element and facilitate retention of the enlarged integral head of securing element within the posterior bore portion.

125. (Pending) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a securing element having an elongated body and an enlarged integral portion having an anterior surface; and
- c. a biased stopping member which has a posterior stopping surface, which has a first configuration within the anterior bore portion that has a first transverse dimension and is elastically deformable to a second configuration within the anterior bore portion that has a second transverse dimension larger than the first transverse dimension that allows the enlarged integral portion of the securing element to pass into the posterior bore portion posterior to the biased stopping member, the biased stopping member returning to the first configuration so that the posterior surface of the stopping member is positioned to engage the anterior surface of the securing element and prevents the securing element from backing out of the posterior bore portion and to facilitate retention of the enlarged integral portion of the securing element within the posterior bore portion.

126. (Amended) The assembly of claim 120 wherein the posterior stopping surface of the stopping member is perpendicular to the longitudinal axis of the bore.

REMARKS

Response to Claim Objections

Claims 31, 122 and 126 were objected to by the Examiner because of the following informalities: It appears that claim 31 should depend on claim 120 instead of claim 29 which has been cancelled; in claim 31, "securing member" should be --securing element--; in claim 122, line 4, "attachment" should be "attachment member". In response applicants have amended these claims as suggested by the Examiner.

The Examiner questioned whether claim 126 depends on claim 120 or claim 125. Applicants note that this claim should depend from claim 120 as indicated.

Response to Claim Rejections Under 35 USC §112

Claims 115-119 and 126 were rejected by the Examiner under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

In response to this rejection applicants have amended claim 115 to delete reference to "a length" to avoid the rejection. However, applicants also wish to note that Figure 5 supports the original claim language.

Applicants have also amended claim 126 to indicate that the posterior stopping surface of the stopping member is perpendicular to the bore axis.

Claims 52-53, 115-119 and 122-124 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claims 52, 115, 122, 124 along the lines suggested by the Examiner to avoid these rejections. Additionally, applicants have further amended claims 52, 116, 118, 119, 122, 123 and 124 to further clarify these claims.

Response to Claim Rejections Under 35 USC §102

Claims 52-53, 63-69 and 73 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by Errico et al. (U.S. Pat. No. 5,876,402).

Claims 52 and 63 have been amended to clarify the relationship of the enlarged integral portion of the securing member with respect to the stopping member. Specifically, these claims call for the enlarged integral portion of the securing element to have a maximum transverse dimension that is greater than the transverse dimension of the stopping member in the second configuration, i.e. after the enlarged portion passes into the posterior bore portion in order to retain the enlarged integral portion within the posterior bore portion and facilitate longitudinal movement of the enlarged integral portion within the posterior bore portion. With the bone plate assembly described in Errico et al. ('402 patent), the integral head (120) of the securing element is rotatably encased within the interior volume (140) of coupling element (132) but is not configured for longitudinal movement within the posterior bore portion. The maximum dimension of the integral head (120) of Errico et al. is smaller than the smallest transverse dimension of the passageway of collar (180). See Fig. 6 of Errico et al. The coupling element 132 of the Errico et al. assembly expands the passageway of the snap-ring or collar (180) not the integral head (120).

The applicants submit that the Errico et al. reference fails to meet all the requirements of claims 52 and 63 as amended above, so the reference does not support the Examiner's §102 rejection of these claims as well as those claims depending therefrom.

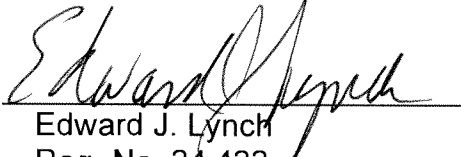
Response to Allowable subject Matter

The applicants note with appreciation the allowance of claims 1-28, 30, 37-40, 43-46, 48-60, 74-79, 84-86, 88, 90, 91, 93,95,98-102, 105, 108, 111-114, 120-121 and 125.

Conclusions

Applicants believe that the pending claims are in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted:

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MARK-UP OF AMENDED CLAIMS

31. (Twice Amended) The attachment assembly of claim [29] 120 wherein the securing [member] element having an enlarged integral portion is slidably disposed within the bore.

52. (Three Times Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion having a maximum transverse dimension,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than a transverse [dimensions] dimension of the anterior bore portion and smaller than the maximum transverse dimension of the enlarged integral portion of the securing member, and

a stopping member which has a first configuration which allows passage of the enlarged integral portion of the securing member and has a second configuration that reduces a transverse [configuration] dimension of the bore that is smaller than the maximum transverse dimension of the enlarged integral portion of the securing member

in order to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone; and
- c) [the enlarged integral portion of the securing member having a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and]

[d)] attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member thereby displacing the stopping member to the first configuration and is disposed in the posterior bore portion, the stopping member then returning to the second configuration to retain the enlarged integral portion within the posterior bore portion and to facilitate longitudinal movement of the enlarged integral portion of the securing member within the posterior bore portion.

63. (Four Times Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion with a transverse dimension and a posterior bore portion which has a posterior opening with a transverse

dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion with a maximum transverse dimension; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing [member] element disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration and smaller than the maximum transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the stabilizing element and to facilitate longitudinal movement of the enlarged integral portion of the securing element within the posterior bore portion.

115. (Twice Amended) The orthopedic attachment assembly of claim 120 wherein,

- a. the elongated securing element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;
- b. the attachment element has an anterior surface and a posterior surface and has at least one bore extending through the

attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to retain the enlarged integral portion of the securing element within the posterior bore portion; and

- c. the stopping member defines at least in part [a length of] the posterior bore portion, said posterior bore portion being [that is] longer than the length of the enlarged integral portion of the securing element to allow longitudinal displacement of the enlarged integral portion of the securing [member] element within the posterior bore portion.

116. (Twice Amended) The orthopedic attachment assembly of claim 115 wherein the securing [member] element has a portion posterior to the enlarged integral portion that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing [member] element within the posterior bore portion.

118. (Amended) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing [member] element has a maximum transverse dimension which is greater than the second transverse dimension of the stopping member.

119. (Amended) The orthopedic attachment assembly of claim 118 wherein

the enlarged integral portion of the securing [member] element has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.

122. (Twice Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing [member] element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing [member] element; and
- c. a plurality of biased stopping members that are part of the attachment member, [which have] each of said stopping members having a posterior stopping [surfaces] surface, a first configuration [that] wherein the stopping members extend within the bore and [that] wherein the stopping members are elastically deformed by the passage of the enlarged portion of the securing [member] element to a second configuration to allow passage of the enlarged portion of the securing [member] element into the posterior bore portion, the biased stopping members returning to the first configuration upon passage of the enlarged portion and the posterior stopping surfaces configured to engage the anterior surface of the

securing [member] element facilitating retention of the enlarged integral portion of the securing [member] element within the posterior bore portion of the attachment member.

123. (Amended) The orthopedic implant assembly of claim 122 wherein the biased stopping [element comprises one or more] members are contractible fingers.

124. (Pending) The orthopedic implant assembly of claim 122 wherein the plurality of biased stopping members comprise resilient longitudinally deflectable members which have first un-deflected configurations within the anterior bore portion and deflected configurations which allow the enlarged integral [head] portion of the securing [member] element to pass into the posterior bore portion, the one or more deflectable members having posterior surfaces that are configured to engage an anterior surface of the enlarged integral [head] portion of the securing [member] element to prevent the back-out of the enlarged integral head of the securing element from the posterior bore of the stabilizing element and facilitate retention of the enlarged integral head of securing element within the posterior bore portion.

126. (Amended) The assembly of claim 120 wherein [at least one of the anterior surface of the head and] the posterior stopping surface of the stopping member [are] is perpendicular to the longitudinal axis of the bore.

**Status And Support For All Claims Not Found In Issued Patent
And Amendments Thereto Pursuant To 37 CFR §1.173(c)**

Claims	Status	Support (Ref. to Issued Patent)
Claim 1	Twice Amended	Col. 4 lines 48-55 (amendment)
Claim 2	Original	
Claim 3	Original	
Claim 4	Original	
Claim 5	Original	
Claim 6	Original	
Claim 7	Original	
Claim 8	Original	
Claim 9	Original	
Claim 10	Original	
Claim 11	Original	
Claim 12	Original	
Claim 13	Original	
Claim 14	Original	
Claim 15	Original	
Claim 16	Original	
Claim 17	Original	
Claim 18	Original	
Claim 19	Original	
Claim 20	Original	
Claim 21	Original	
Claim 22	Original	
Claim 23	Original	
Claim 24	Original	
Claim 25	Original	
Claim 26	Original	
Claim 27	Original	
Claim 28	Original	
Claim 29	Cancelled	Cancelled
Claim 30	Thrice Amended	Figs. 3-5; Col. 4, line 64, Col. 5, line 30

Claims	Status	Support (Ref. to Issued Patent)
Claim 31	Twice Amended	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled	Cancelled
Claim 33	Pending	Fig. 5; Col.5, lines 59-67
Claim 34	Pending	Figs. 1-6
Claim 35	Pending	Figs. 1-6
Claim 36	Cancelled	Cancelled
Claim 37	Thrice Amended	Fig. 4; Col.1, lines 45-47; Col. 5, lines 2-15
Claim 38	Pending	Figs. 3-5; Col.4, lines 31-33
Claim 39	Pending	Figs. 2-5
Claim 40	Pending	Fig. 13
Claim 41	Cancelled	Cancelled
Claim 42	Pending	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Amended	Fig. 1
Claim 44	Amended	Fig. 1; Col. 7, lines 52-57
Claim 45	Amended	Col. 7, lines 47-57
Claim 46	Amended	Col. 7, lines 49-52
Claim 47	Pending	Col. 2, lines 6-8
Claim 48	Pending	Col. 6, lines 1-3
Claim 49	Pending	Col. 6, lines 1-3
Claim 50	Pending	Figs. 2-6
Claim 51	Pending	Figs. 3-5
Claim 52	Three Times Amended	Col. 2, lines 19-46; Figs. 1-6, Col 4, line 14 to Col. 6 line 16
Claim 53	Pending	Col. 2, lines 61-67
Claim 54	Twice Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 55	Pending	Figs 8 and 10; Col. 6, lines 31-50
Claim 56	Pending	Figs. 7-12
Claim 57	Pending	Figs. 7, 8 and 10
Claim 58	Pending	Figs. 8, 10 and 12
Claim 59	Pending	Figs. 7-12; Col. 2, lines 46-60
Claim 60	Amended	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled	Cancelled
Claim 62	Cancelled	Cancelled
Claim 63	Four Times Amended	Col. 2, lines 18-46; Figs. 1-6; Col. 4, line 13, Col. 6, line 16; Figs. 13-15; Col. 5, lines 51-59

Claims	Status	Support (Ref. to Issued Patent)
Claim 64	Pending	Col. 5, lines 21-30
Claim 65	Twice Amended	Col. 5, lines 15-20
Claim 66	Pending	Col. 5, lines 2-8
Claim 67	Pending	Col. 5, lines 30-33
Claim 68	Pending	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Pending	Fig. 4; Col. 5, lines 2-8
Claim 70	Twice Amended	Fig. 4; Col. 5, lines 2-8
Claim 71	Pending	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Pending	Fig. 14
Claim 73	Pending	Fig. 14
Claim 74	Pending	Fig. 6; Col 5, lines 46-67
Claim 75	Pending	Fig. 1; Col 7, lines 62-67
Claim 76	Pending	Fig. 1; Col 7, lines 52-57
Claim 77	Pending	Col. 7, lines 52-57
Claim 78	Pending	Col. 7, lines 49-52
Claim 79	Pending	Col. 2, lines 6-8
Claim 80	Cancelled	Cancelled
Claim 81	Cancelled	Cancelled
Claim 82	Cancelled	Cancelled
Claim 83	Cancelled	Cancelled
Claim 84	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 85	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 86	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 87	Cancelled	Cancelled
Claim 88	Pending	Figs. 8, 10 and 12
Claim 89	Cancelled	Cancelled
Claim 90	Amended	Fig. 3; Col. 1, lines 42-55
Claim 91	Thrice Amended	Fig. 3; Col. 1, lines 42-55
Claim 92	Cancelled	Cancelled
Claim 93	Amended	Col.2, lines 61-67
Claim 94	Cancelled	Cancelled
Claim 95	Thrice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Cancelled	Cancelled
Claim 97	Cancelled	Cancelled

Claims	Status	Support (Ref. to Issued Patent)
Claim 98	Thrice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67, Figs. 2-6; Col. 4, line 13, Col. 6, line 16
Claim 100	Pending	Figs. 7-12; Col. 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 101	Pending	Figs. 7-12; Col. 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6; lines Col. 4, line 13, Col. 6, line 16
Claim 102	Thrice Amended	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Cancelled	Cancelled
Claim 104	Cancelled	Cancelled
Claim 105	Amended	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Pending	Figs. 5-6, lines 51-67
Claim 107	Cancelled	Cancelled
Claim 108	Amended	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	Cancelled	Cancelled
Claim 110	Cancelled	Cancelled
Claim 111	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 112	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 113	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 114	Amended	Fig. 5; Col. 5, lines 46-51
Claim 115	Twice Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 116	Twice Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 117	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 118	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 119	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 120	Pending	Figs. 1-6; Col. 1, line 42, Col.2, line 45, Col. 4, line 8, Col. 6, line 16
Claim 121	Pending	Figs. 7-12; Col. 2, lines 46-67, Col. 6, lines 1-54
Claim 122	Amended	Figs. 13-15; Col. 4, lines 18-23, Col. 6, line 55, Col. 7, line 22
Claim 123	Amended	Co. 4, lines 18-23
Claim 124	Amended	Figs. 13-15; Col. 6, line 55, Col. 7, line 22

Claims	Status	Support (Ref. to Issued Patent)
Claim 125	Pending	Figs. 1-6; Col. 1, line 42, Col.2, line 45, Col. 4, line 8, Col. 6, line 16
Claim 126	Amended	Figs. 1-6; Col. 5, lines 19-25

Electronic Acknowledgement Receipt

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Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	Orthopedic implant assembly
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90045
Filer:	Edward J. Lynch/Ruth Der
Filer Authorized By:	Edward J. Lynch
Attorney Docket Number:	ACANP-00101
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Application Type:	Utility under 35 USC 111(a)

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	transmittal.pdf	40928 77d43d9089b4cb626fc0edf2aa3188693127a27a	no	1

Warnings:

Information:

2	Amendment/Req. Reconsideration-After Non-Final Reject	amendmentresponse.pdf	794229 b2160df5af8434ed0aafb71225a1b87cac6 d507	no	32
Warnings:					
Information:					
3	Claims	markupamendedclaims.pdf	119002 bb6da08dc40ddb70d02fc3106e3e3575f42 50eeb	no	6
Warnings:					
Information:					
4	Claims	claimsupport.pdf	137352 fcd53c4364fa74b79fc92016c8d11dc10468 1a66	no	5
Warnings:					
Information:					
Total Files Size (in bytes):			1091511		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3775
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	Customer No.: 90045
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT	)	TRANSMITTAL
ASSEMBLY	)	
Filed: July 15, 2003	)	

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

 X Amendment And Response To Office Action Mailed 08/10/2010;
 X Mark-Up Of Amended Claims; and
 X Status And Support For All Claims Not Found In Issued Patent And
Amendments Thereto Pursuant To 37 CFR §1.173(c).

2. Fees due

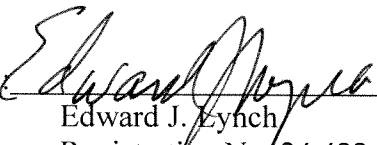
 X No additional claim fee is required.

Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	2201	13 – 16 =	0 x	\$110.=	-0-
Total Claims	2202	102 – 108 =	0 x	\$26.=	-0-

3. Payment of Fees

 X There is no fee due with this communication. However, the Commissioner is authorized to charge the fees, the deficiency in payment and/or to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted,

By 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
Patent Attorney
Four Embarcadero Center, Suite 1700
San Francisco, CA 94111
Tel: (415) 391-9300
Fax: (415) 391-9304

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/620,154		Filing Date 07/15/2003		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)		SMALL ENTITY ☐ OR		OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$	=		X \$	=			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL				
APPLICATION AS AMENDED – PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	08/17/2010	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 105	Minus	** 108 = 0	X \$	=		X \$52=	0	
	Independent (37 CFR 1.16(h))	* 13	Minus	*** 16 = 0	X \$	=		X \$220=	0	
☐ Application Size Fee (37 CFR 1.16(s))										
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE			TOTAL ADD'L FEE	0	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	** =	X \$	=		X \$	=	
	Independent (37 CFR 1.16(h))	*	Minus	*** =	X \$	=		X \$	=	
☐ Application Size Fee (37 CFR 1.16(s))										
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE			TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/BURNELL L. ROSS/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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CHANGE OF CORRESPONDENCE ADDRESS Application

Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/620,154
Filing Date	July 15, 2003
First Named Inventor	David J. Talaber
Art Unit	3775
Examiner Name	Anuradha Ramana
Attorney Docket Number	ACANP-00101

Please change the Correspondence Address for the above-identified patent application to:

☒ The address associated with
Customer Number:

90045

OR

☐ Firm or
Individual Name EDWARD J. LYNCH, Patent Attorney

Address Four Embarcadero Center
Suite 1700

City San Francisco

State CA

Zip 94111

Country USA

Telephone 415-391-9300

Email elynch@lynchiplaw.com

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

I am the:

☐ Applicant/Inventor

☐ Assignee of record of the entire interest.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

☒ Attorney or agent of record. Registration Number 24422

☐ Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number _____

Signature

Typed or Printed
Name Edwawrd J. Lynch

Date August 12, 2010

Telephone 415-391-9300

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	8215438
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	Orthopedic implant assembly
First Named Inventor/Applicant Name:	David J. Talaber
Customer Number:	90044
Filer:	Edward J. Lynch/Ruth Der
Filer Authorized By:	Edward J. Lynch
Attorney Docket Number:	ACANP-00101
Receipt Date:	13-AUG-2010
Filing Date:	15-JUL-2003
Time Stamp:	13:49:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Change of Address	associateapplntocustomernumber.pdf	50642 87cbacd2d493435858683154a3deaddd042314a5	no	1

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 08/10/2010
EDWARD J LYNCH
PATENT ATTORNEY
One Embarcadero Center
Suite 562
San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

3775

MAIL DATE	DELIVERY MODE

08/10/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3775	

All participants (applicant, applicant's representative, PTO personnel):

(1) Edward J. Lynch. (3) ____.

(2) Anu Ramana. (4) ____.

Date of Interview: 05 August 2010.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
 If Yes, brief description: ____.

Claim(s) discussed: 31 and 126.

Identification of prior art discussed: None.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: A minor change to claim 31 was discussed and agreed upon to overcome a claim objection. An amendment to claim 126 was discussed and agreed upon to overcome a potential rejection under 35 USC 112 first paragraph. Please refer to the attached office action.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Office Action Summary	Application No.	Applicant(s)	
	10/620,154	TALABER ET AL.	
	Examiner	Art Unit	
	Anu Ramana	3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) See Continuation Sheet is/are allowed.
- 6) ☒ Claim(s) 52, 53, 63-69, 73, 115-119, 122-124 and 126 is/are rejected.
- 7) ☒ Claim(s) 31, 33-35, 42, 47 and 106 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☒ Interview Summary (PTO-413)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. <u>20100808</u> .
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)	5) ☐ Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1-28, 30-31, 33-35, 37-40, 42-60, 63-79, 84-86, 88, 90-91, 93, 95, 98, 102, 105-106, 108, and 111-126.

Continuation of Disposition of Claims: Claims allowed are 1-28, 30, 37-40, 43-46, 48-51, 54-60, 74-79, 84-86, 88, 90, 91, 95, 98-102, 105, 108, 111-114, 120, 121 and 125.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 24, 2010 has been entered.

Claim Objections

Claims 31, 122 and 126 are objected to because of the following informalities.

The clean copy of the claims submitted on March 19, 2010 does not have the correct claim dependency. It appears that claim 31 should depend on claim 120 instead of claim 29 which has been canceled. It is noted that all references to line numbers are with respect to the clean copy of claims filed on February 24, 2010.

In claim 31, it appears that "securing member" should be - - securing element - - to correct a minor typographical error.

In claim 122, line 4, "an attachment" should be "attachment member" to correct a minor typographical error.

It is also not clear whether claim 126 depends on claim 120 or claim 125.

Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 115-119 and 126 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 115, the recitation "c. the stopping member defines at least in part a length of the posterior bore portion.....within the posterior bore portion." seeks to introduce new matter. Applicant's disclosure, as originally filed, recites "the posterior section 25 of the transverse passageway is sufficiently longer than the head 24 of the securing element so that the head can be displaced anteriorly and posteriorly, and is thus longitudinally displaceable within the posterior section of the transverse passageway (col. 5, lines 46-51 of US 6,261,291)."

In claim 126, the recitation "at least one of the anterior surface of the head" seeks to introduce new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52-53, 115-119 and 122-124 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is noted that all references to line numbers are with respect to the clean copy of claims filed on February 24, 2010.

In claim 52, line 11, the recitation "smaller than transverse dimensions of the anterior bore portion" renders the claim vague and indefinite since it is unclear which transverse dimension is being referred to. It is suggested that Applicant recite "smaller than a transverse dimension of the anterior bore portion" for clarity.

In claim 115, lines 15-19, the recitation "c. the stopping member defines in part a length of the posterior bore portion.....the enlarged integral portion of the securing member within the posterior bore portion." renders the claim vague and indefinite

because the structure being recited is unclear. The stopping member does not define the length of the posterior bore portion.

In claim 122, lines 11-13, the structure being recited is unclear due to runon recitation of structural features. It is suggested that language similar to "each of said stopping members having a posterior stopping surface, a first configuration wherein the stopping members extend within the bore and wherein the stopping members are elastically deformed" for clarity.

In claim 123, the recitation "stopping element comprises one or more contractible fingers" renders the claim vague and indefinite since it isn't clear whether the biased stopping members are contractible fingers or whether the contractible fingers are additional structural elements.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 52-53, 63-69 and 73 are rejected under 35 U.S.C. 102(e) as being anticipated by Errico et al. (US 5,876,402).

Errico et al. disclose an orthopedic implant assembly including: a stabilizing element 100; a bore 111 having an anterior bore portion and a posterior bore portion, the posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion; a securing member 120 having an enlarged integral portion or head 122; a stopping element or snap-ring or collar 180 disposed within the bore, the snap ring having a first configuration or deflected state allowing

Art Unit: 3775

passage of the securing member into the posterior bore portion and a second or undeflected state that facilitates retention of the enlarged integral portion of the securing member within the posterior bore portion (Figs. 3b and 6, col. 5, lines 41-67 and col. 6, lines 1-55).

The method steps of claims 52 and 53 are inherently performed when the Errico et al. implant is attached to bone.

Response to Arguments

Applicant's arguments and claim amendments filed on February 24, 2010 have been carefully considered by the examiner. It is noted that the Examiner had a telephone interview with the Attorney of Record, Mr. Edward J. Lynch on Thursday, August 5, 2010. However, due to new rejections made in this office action, the Examiner is unable to allow the instant application with an Examiner's Amendment. The Examiner sincerely apologizes for any inconvenience caused to the Applicant by this action.

Applicant's arguments with respect to the rejections under 35 USC 112 first paragraph made in the previous office action are found to be persuasive. Support for the limitation of claim 120 "the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member" and variations thereof in claims 121, 122 and 125, is found at col. 5, lines 25-30 of US 6,261,291. Accordingly, the examiner is withdrawing the rejection under 35 USC 112 first paragraph made in the previous office action.

Allowable Subject Matter

Claims 1-28, 30, 37-40, 43-46, 48-60, 74-79, 84-86, 88, 90, 91, 93, 95, 98-102, 105, 108, 111-114, 120-121 and 125 are allowed.

Claims 31, 33-35, 42, 47 and 106 would be allowable if the minor objection made in this office action is addressed.

Claims 70-72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 122-124 would be allowable if the rejection under 35 U.S.C. 112 second paragraph made in this action is overcome.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached at (571) 272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3775

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR
August 8, 2010

/Anu Ramana/
Primary Examiner, Art Unit 3775

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010				
	1	=		✓	✓	=				
	2	=		✓	✓	=				
	3	=		✓	✓	=				
	4	=		O	✓	=				
	5	=		O	✓	=				
	6	=		O	✓	=				
	7	=		O	✓	=				
	8	=		O	✓	=				
	9	=		✓	✓	=				
	10	=		✓	✓	=				
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	15	=		✓	✓	=				
	16	=		✓	✓	=				
	17	=		✓	✓	=				
	18	=		O	✓	=				
	19	=		✓	✓	=				
	20	=		O	✓	=				
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	27	=		=	=	=				
	28	=		=	=	=				
	29			✓	✓	-				
	30			✓	✓	=				
	31			✓	✓	O				
	32			-	-	-				
	33			✓	✓	O				
	34			✓	✓	O				
	35			✓	✓	O				
	36			✓	✓	-				

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010				
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	38			✓	✓	=				
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	42			✓	✓	O				
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	68			✓	✓	✓				
	69			✓	✓	✓				
	70			✓	✓	O				
	71			✓	✓	O				
	72			✓	✓	O				

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010				
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	101			✓	✓	=				
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	104			✓	✓	-				
	105			✓	✓	=				
	106			✓	✓	O				
	107			=	=	-				
	108			=	=	=				

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA										☐ T.D.										☐ R.1.47									
CLAIM		DATE																																					
Final	Original	03/03/2008		03/09/2008	12/06/2009	08/08/2010																																	
	109			=	=	-																																	
	110			=	=	-																																	
	111			=	=	=																																	
	112			=	=	=																																	
	113			=	=	=																																	
	114			✓	✓	=																																	
	115				✓	✓																																	
	116				✓	✓																																	
	117				✓	✓																																	
	118				✓	✓																																	
	119				✓	✓																																	
	120					=																																	
	121					=																																	
	122					✓																																	
	123					✓																																	
	124					✓																																	
	125					=																																	
	126					✓																																	

Search Notes 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Search.	3/9/2008	A.Ramana
Updated Search.	12/6/2009	A. Ramana
Updated Search.	8/8/2010	A. Ramana

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

**CHANGE OF
CORRESPONDENCE ADDRESS
Application**

Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/620,154
Filing Date	July 15, 2003
First Named Inventor	David J. Talaber
Art Unit	3775
Examiner Name	Anuradha Ramana
Attorney Docket Number	ACANP-00101

Please change the Correspondence Address for the above-identified patent application to:

☒ The address associated with
Customer Number:

90044

OR

☒ Firm or
Individual Name **EDWARD J. LYNCH**

Address **Four Embarcadero Center
Suite 1700**

City **San Francisco**

State **CA**

Zip **94111**

Country **USA**

Telephone **415.391.9300**

Email
elynych@lynchiplaw.com

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

I am the:

- ☐ Applicant/Inventor
- ☐ Assignee of record of the entire interest.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
- ☒ Attorney or agent of record. Registration Number **24,422**
- ☐ Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number _____

Signature

Typed or Printed
Name

Edward J. Lynch

Date **August 10, 2010**

Telephone **415.391.9300**

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of **1** forms are submitted.

This collection of information is required by 37 CFR 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	8192025
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	Orthopedic implant assembly
First Named Inventor/Applicant Name:	David J. Talaber
Correspondence Address:	EDWARD J LYNCH PATENT ATTORNEY One Embarcadero Center Suite 562 San Francisco CA 94111 US - -
Filer:	Edward J. Lynch/Ruth Der
Filer Authorized By:	Edward J. Lynch
Attorney Docket Number:	R0372-00101
Receipt Date:	10-AUG-2010
Filing Date:	15-JUL-2003
Time Stamp:	17:30:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Change of Address	changecorrespondenceaddress.pdf	50762 d8c804047aa5689a3afe0306ef12987ef3492209	no	1

Warnings:

Information:

Total Files Size (in bytes):	50762

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 03/19/2010
EDWARD J LYNCH
PATENT ATTORNEY
One Embarcadero Center
Suite 562
San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

3775

MAIL DATE	DELIVERY MODE

03/19/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3775	

All participants (applicant, applicant's representative, PTO personnel):

(1) Edward J. Lynch. (3) ____.

(2) Anu Ramana. (4) ____.

Date of Interview: 03 March 2010.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: ____.

Claim(s) discussed: 1,63,120-122 and 125.

Identification of prior art discussed: Dill (US 5118235) and Campbell et al. (US 6258089).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's Representative and the Examiner discussed the art of record. The Examiner agreed to reconsider the rejections of record, in light of the amendment filed on February 24, 2010. The Examiner also stated that the amendment would be acted upon in a timely manner.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Anu Ramana/ Primary Examiner, Art Unit 3775	March 14, 2010

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
	)	
Patent No.: 6,261,291	)	Group Art Unit: 3775
	)	
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
	)	
Inventors: Talaber et al.	)	Customer No.: 90045
	)	
Reissue Serial No.: 10/620,154	)	
	)	
For: ORTHOPEDIC IMPLANT	)	REQUEST FOR CONTINUED
ASSEMBLY	)	EXAMINATION UNDER
	)	37 CFR §1.114
	)	

Filed: July 15, 2003

Mail Stop Reissue
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sir:

This is a request for continued examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

1. **Submission required under 37 C.F.R. § 1.114**

- a. ☐ Previously submitted
- i. ☐ Consider the amendment(s)/reply under 37 C.F.R. § 1.116 previously filed on _____ (any unentered amendment(s) referred to above will be entered).
- ii. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____.
- iii. ☐ Other: _____.
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- ii. ☐ Affidavit(s)/Declaration(s)
- iii. ☐ Information Disclosure Statement (IDS)
- iv. ☐ Other: Terminal Disclaimer

2. **Filing Fees**

Description	Fee Code	Claims	Extra	Rate	Fee
RCE Fee	2801				\$405.
Independent Claims	2204	13 – 16 =	0 x	\$110.=	-0-
Total Claims	2205	102 – 108 =	0 x	\$26.=	-0-

Total Filing Fees Due.....\$405.

4. **Payment of Fees**

/ X / The Commissioner is authorized to charge the fees due, the deficiency in payment and /or credit any overpayment of fees required under 37 C.F.R. §§1.16 and 1.17 to Deposit Account No. 50-4358, **referencing Atty. Docket No. ACANP-00101.**

5. **Address all future communications to:**

CUSTOMER NO. 90045

EDWARD J. LYNCH
Patent Attorney
Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

6. **Other documents enclosed herewith:**

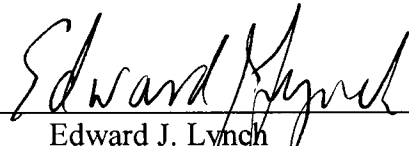
/ X / Other:

/ X / Mark-Up Of Amended Claims.

/ X / Status And Support For All Claims Not Found In Issued Patent And Amendments Thereto Pursuant To 37 CFR 1.173(c).

/ X / Applicant Initiated Interview Request Form (form PTOL-413A).

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
	)	
Patent No.: 6,261,291	)	Group Art Unit: 3775
	)	
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
	)	
Inventors: Talaber et al.	)	Customer No.: 90045
	)	
Reissue Serial No.: 10/620,154	)	
	)	
For: ORTHOPEDIC IMPLANT	)	AMENDMENT AND RESPONSE TO
ASSEMBLY	)	OFFICE ACTION MAILED
	)	12/07/2009
	)	
Filed: July 15, 2003	)	

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In response to the final Office Action mailed on December 7, 2009, and pursuant to the concurrently filed Request for Continued Examination (RCE), please replace the amended claim pages with the following new claim pages. A marked-up copy of the amended claims indicating the changes made thereto is attached for the convenience of the Examiner.

Also included herewith is a request for a personal interview with the Examiner on form PTOL-413A.

IN THE CLAIMS:

Please cancel without prejudice claims 29, 36, 89, 92, 94, 96, 104, 107, and 109-110, amend claims 1, 30, 31, 37, 43-46, 60, 63, 90-91, 93, 95, 98-99, 102, 105, 108, 111-117 and add new claims 120-126 as indicated below.

1. (Twice Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the stopping member and the second opening in the stabilizing element.

2. (Original) The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargeable from an unexpanded inner diameter to an expanded inner diameter, wherein the head of the securing

element has a maximum diameter greater than the unexpanded inner diameter of the collar and less than the expanded inner diameter of the collar.

3. (Original) The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.

4. (Original) The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.

5. (Original) The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

6. (Original) The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.

7. (Original) The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

8. (Original) The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.

9. (Original) The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

10. (Original) The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. (Original) The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. (Original) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. (Original) The assembly of claim 1 wherein the stabilizing element is

configured to conform to and extend between at least two bone segments.

14. (Original) The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. (Original) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. (Original) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. (Original) The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. (Original) The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. (Original) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. (Original) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second

opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;

- b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse

passageway of the stabilizing element.

22. (Original) The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. (Original) An orthopedic implant assembly, comprising

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface; and
- b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element.

24. (Original) The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

25. (Original) The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members; the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. (Original) The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. (Original) The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second

- opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface;
- b) providing a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element;
 - c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and
 - d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Cancelled)

30. (Thrice Amended) The attachment assembly of claim 120 wherein the first configuration of the stopping member has inner transverse dimensions that are smaller than transverse dimensions of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and

the second configuration of the stopping member has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.

31. (Amended) The attachment assembly of claim 29 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Pending) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Pending) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Pending) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Cancelled)

37. (Thrice Amended) The attachment assembly of claim 120 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension by the passage of the enlarged integral portion of the securing member therethrough.

38. (Pending) The attachment assembly of claim 37 wherein the bore has a groove which receives the collar.

39. (Pending) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Pending) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Pending) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 120 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 120 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 120 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 120 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Pending) The attachment assembly of claim 31 wherein the securing member is selected from the group consisting of screws and nails.

48. (Pending) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Pending) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Pending) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Pending) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Twice Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral

portion,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;

c) the enlarged integral portion of the securing member having a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and

d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

53. (Pending) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member

may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Twice Amended) An orthopedic implant assembly, comprising:

a) a securing element with an elongated body and an enlarged head;

b) an attachment member comprising

an attachment component which has at least one bore configured

to receive the securing element, the bore having a first bore

portion, and a second bore portion having at least one

smaller transverse dimension than transverse dimensions of

the first bore portion;

a stopping surface which reduces a transverse configuration of the

first bore portion to retain the enlarged head of the securing

element within the bore of the attachment member between

the stopping surface and the second bore portion, and

a third bore portion between the stopping surface and the second

bore portion having a surface configured to conform at least

in part to part of the enlarged head of the securing element

received by the bore; and

c) the enlarged head of the securing element having a reversibly

compressed configuration with transverse dimensions less than the

reduced transverse configuration of the first bore portion formed at

least in part by the stopping surface and having an uncompressed

configuration with a transverse dimension greater than the reduced

transverse configuration of the first bore portion and the second bore portion, so that the head of the securing element is retained within the bore between the stopping surface and the second bore portion in the attachment component.

55. (Pending) The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. (Pending) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (Pending) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (Pending) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Pending) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
an attachment component which has at least one bore configured to
receive a securing element with an enlarged head, the bore having

a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion,

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

b) positioning the attachment member against a surface of the patient's bone;

c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within the second bore portion in the attachment component; and

d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Amended The attachment assembly of claim 120, wherein

a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and

b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Thrice Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing member disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the stabilizing element.

64. (Pending) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Twice Amended) The assembly of claim 63 wherein the stopping member is biased to the second configuration.

66. (Pending) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Pending) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Pending) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Twice Amended) The assembly of claim 69 wherein the curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Pending) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Pending) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Pending) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

75. (Pending) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (Pending) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (Pending) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Pending) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Pending) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Pending) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,
- b. a stopping member at the anterior portion of the bore; and
- c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (Pending) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (Pending) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the

securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. (Pending) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Cancelled)

90. (Amended) The assembly of claim 120 wherein the stopping element comprises a biased collar.

91. (Thrice Amended) The assembly of claim 90 wherein the biased collar is elastically deformable to the second configuration.

92. (Cancelled)

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element.

94. (Cancelled)

95. (Thrice Amended) The orthopedic implant assembly of claim 121 wherein the biased enlarged portion of the securing element comprises at least one resilient [longitudinally deflectable] member that deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Cancelled)

97. (Cancelled)

98. (Thrice Amended) The orthopedic implant assembly of claim 125 wherein the biased stopping member elastically returns from the first configuration back

to the second configuration.

99. (Amended) The assembly of claim 125 wherein the biased stopping member comprises a collar.

100. (Pending) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

101. (Pending) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Thrice Amended) The attachment assembly of claim 120, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

103. (Cancelled)

104. (Cancelled)

105. (Amended) The attachment assembly of claim 120 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Pending) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (Cancelled)

108. (Amended) The assembly of claim 121 wherein the biased enlarged portion of the securing element comprises a biased collar.

109. (Cancelled)

110. (Cancelled)

111. (Amended) The assembly of claim 121 wherein the compressible part of the enlarged portion of the securing element comprises at least one circumferentially disposed member.

112. (Amended) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the shaft of the securing element.

113. (Amended) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the shaft of the securing element.

114. (Amended) The orthopedic attachment assembly of claim 120 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing element so that the enlarged integral portion of the securing element is longitudinally displaceable within the posterior bore portion when retained therein.

115. (Amended) The orthopedic attachment assembly of claim 120 wherein,

a. the elongated securing element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;

b. the attachment element has an anterior surface and a posterior surface and has at least one bore extending through the

attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to retain the enlarged integral portion of the securing element within the posterior bore portion; and

c. the stopping member defines at least in part a length of the posterior bore portion that is longer than the length of the enlarged integral portion of the securing to allow longitudinal displacement of the enlarged integral portion of the securing member within the posterior bore portion.

116. (Amended) The orthopedic attachment assembly of claim 115 wherein the securing member has a portion posterior to the enlarged integral portion that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing member within the posterior bore portion.

117. (Amended) The orthopedic attachment assembly of claim 115 wherein the second configuration of the stopping member has a transverse dimension that is larger than the transverse dimension of the stopping member in the first configuration.

118. (Pending) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing member has a maximum transverse

dimension which is greater than the second transverse dimension of the stopping member.

119. (Pending) The orthopedic attachment assembly of claim 118 wherein the enlarged integral portion of the securing member has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.

120. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral

portion into the posterior bore portion, the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

121. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having a biased enlarged portion with a length, an anterior surface, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the biased enlarged portion of the securing member to facilitate retention of the enlarged portion of the securing member within the posterior bore portion; and
- c. a stopping member which has an anterior surface, and a posterior stopping surface which extends within the bore;
- d. the biased enlarged portion of the securing member is elastically deformed from a first configuration to a second configuration as the biased enlarged portion passes the stopping member during the passage of the biased enlarged portion of the securing member into the posterior bore

portion of the attachment member, the biased enlarged portion of the securing member returning to the first configuration after passage of the biased enlarged portion into the posterior bore portion of the attachment member, engagement of the posterior stopping surface of the stopping member with the anterior surface of the biased enlarged portion of the securing member facilitating retention of the biased enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

122. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged portion with a length, an anterior surface a posterior surface and a transverse dimension;
- b. an attachment which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member; and
- c. a plurality of biased stopping members that are part of the attachment member which have posterior stopping surfaces, a first configuration that extend within the bore and that are elastically deformed by the passage of the enlarged portion of the securing member to a second configuration to allow passage of the enlarged portion of the securing member into the

posterior bore portion, the biased stopping members returning to the first configuration upon passage of the enlarged portion and the posterior stopping surfaces configured to engage the anterior surface of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

123. (New) The orthopedic implant assembly of claim 122 wherein the stopping element comprises one or more contractible fingers.

124. (New) The orthopedic implant assembly of claim 122 wherein the plurality of biased stopping members comprise resilient longitudinally deflectable members which have first un-deflected configurations within the anterior bore portion and deflected configurations which allow the enlarged integral head of the securing member to pass into the posterior bore portion, the one or more deflectable members having posterior surfaces that are configured to engage an anterior surface of the enlarged integral head of the securing member to prevent the back-out of the integral head of the securing element from the posterior bore of the stabilizing element and facilitate retention of the enlarged integral head of securing element within the posterior bore portion.

125. (New) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a

posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element having an elongated body and an enlarged integral portion having an anterior surface; and

c. a biased stopping member which has a posterior stopping surface, which has a first configuration within the anterior bore portion that has a first transverse dimension and is elastically deformable to a second configuration within the anterior bore portion that has a second transverse dimension larger than the first transverse dimension that allows the enlarged integral portion of the securing element to pass into the posterior bore portion posterior to the biased stopping member, the biased stopping member returning to the first configuration so that the posterior surface of the stopping member is positioned to engage the anterior surface of the securing element and prevents the securing element from backing out of the posterior bore portion and to facilitate retention of the enlarged integral portion of the securing element within the posterior bore portion.

126. (New) The assembly of claim 120 wherein at least one of the anterior surface of the head and the posterior stopping surface of the stopping member are perpendicular to the longitudinal axis of the bore.

REMARKS

Response to Claim Objections

Claim 117 was objected to by the Examiner because of the following informalities: In claim 117, line 3, "is" should be "in" to correct a minor typographical error and in claim 117, the Examiner suggested that transverse dimension in the first configuration be qualified using "first" and the transverse dimension in the second configuration be qualified using "second" to avoid confusion.

In response, applicants have amended claim 117 as suggested by the Examiner.

Response to Claim Rejections Under 35 USC §112

Claims 1-20, 51, 74-79, and 89-93 were rejected by the Examiner under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner contends that the recitation "so the head is retained by the posterior stopping surface of the stopping member" found in claim 1 introduces new matter.

Applicants disagree. The entire passage in claim 1 is "so that the head is retained by the posterior stopping surface of the stopping member within the transverse passageway between the biased stopping member and the second opening in the stabilizing element". The Examiner agrees that the stopping surface prevents the back-out of the screw or securing element and therefore would prevent the enlarged head from leaving the transverse passageway between the biased stopping member and the second opening in the stabilizing element or bone plate. As clearly shown in Figure 5 the small posterior opening in the stabilizing element prevents the enlarged head of the securing element from exiting the posterior bore portion posteriorly and the stopping

surface of the stopping member prevents the enlarged head of the securing element from exiting the transverse passageway anteriorly. In essence the head is retained within the passageway by the stopping surface of the stopping member and the posterior opening in the stabilizing element.

In column 3, lines 1-3, of the issued '291 patent the following statement is found

In the assembly of the invention, the securing element is prevented from backing out of the bone by the interaction of the securing element head and the stopping member.

In column 3, lines 16-23, of the issued '291 patent the statement is made

The orthopedic implant assembly of the invention can be durably attached to bone, and the securing element prevented from significantly backing out of the bone due to the head of the securing element being retained within the stabilizing element. (Emphasis Added)

Furthermore, as noted in Column 5, lines 25-30 of the '291 patent

Thus, the anterior surface of the head will butt up against the posterior surface of the collar without expanding the collar, to prevent the securing element from being anteriorly displaced out of the posterior section of the transverse passageway.

As shown in Figures 5, 10 and 14, the posterior stopping surface of the stopping member and the posterior opening prevent the enlarged head from being displaced from the posterior bore portion of the stabilizing element, i.e. they retain the head within the posterior bore portion. Therefore, it is clear that the posterior stopping surface of the stopping member facilitates retention of the head within the passageway as called for in claim 1. The fact that the small posterior opening would also facilitate retention of the head within the passageway, in no way negates the fact that the posterior stopping surface of the stopping member likewise facilitates retention of the head within the passageway.

The law is clear that the claim language need not be described *in haec verba* or

in *ipsis verbis* to meet the description requirement (§112(1)). *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 97 (CCPA 1976) *appeal after remand*, 646 F.2d. 527, 209 USPQ 554 (CCPA) 1981); *Fujikawa v. Wattanassin*, 93 F.3d. 1559, 1570, 39 USPQ 1895, 1904 (Fed. Cir.1996). Applicants submit that there is no question that the stopping surface of the stopping member at least in part retains the head of the securing member within the posterior bore portion, so this claimed feature of facilitating retention of the head within the posterior bore portion is adequately described in the specification and is therefore not new matter.

Applicants also believe that even the dictionary definition of the term “retain” (See the attached page 1213 of Webster. New World Dictionary attached as Exhibit A) supports applicants’ use of the term. See for example definitions 1 and 3, namely “to hold or keep in possession” and “to continue to have or hold in”. That is exactly what the stopping member does, it holds the head within the passageway.

Applicants submit that these claims comply with the written description requirement.

Claims 1-20, 29-31, 33-40, 42-51, 60, 63-79, 89-102, 104-106 and 114-119 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner contends that the recitation “by the posterior stopping surface of the stopping member within the transverse passageway between the biased stopping member and the second opening in the stabilizing member” render the claim vague because it amounts to a double inclusion. While the applicants believe that it is clear that claim 1 includes only one stopping member and

that is the biased stopping member and that the stopping member has a posterior stopping surface that retains the head of the securing element within the posterior bore portion, nonetheless applicants have amended claim 1 to call for the stopping member in line 4 and line 7 of claim section c. to be “the stopping member” which refers back to the biased stopping member in claim section b. to avoid the possibility of vagueness. As to claims 29, 89, 94 and 96, these claims have been cancelled without prejudice. However, the new independent claims 120-126 and the prior claim 63 call for facilitating retention of the head of the securing member within the posterior bore portion. From the above discussion it is clear that stopping member facilitates retention of the head of the screw (along with the small posterior opening in the stabilizing element) within the passageway.

Response to Claim Rejections Under 35 USC §102

Claims 89-95, 115 and 116 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by Dill (U.S. Pat. No. 5,118,235). Claims 89 and 94 have been cancelled and new claims 120 and 124 have been added. Applicants’ new claims call for the stopping member to have a first configuration which is deformed elastically by the enlarged portion of the securing element to a second configuration to allow the enlarged portion to pass into the posterior bore portion. The stopping member then returns to the first configuration so that the posterior stopping surface of the stopping member prevents the enlarged portion from backing out of the posterior bore portion.

In comparison, the flap (90) of Dill is outside of the anterior bore portion in a first configuration in order to allow the screw head 24 to pass through the anterior bore portion to the posterior bore portion. Importantly, the flap (90) is not contacted by the

head and must be deformed by the operator. The flap is required to be pushed beyond the lip 80 by the operator in order to position the flap to prevent the screw head from backing out. The flap of Dill is not elastically deformed from the first configuration to the second configuration by the head of the screw as called for in the new claims 120 and 124. Dill therefore fails to teach all of the claimed features of new claims, so this reference cannot anticipate these claims as contended by the Examiner.

Claims 89-95 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by Campbell et al. (U.S. Pat. No. 6,258,089). In reviewing Campbell et al. it was noted that there were basically three embodiments, one shown in Figures 1-24, one shown in Figures 25-27 and one referenced in column 8, lines 19-21 wherein the locking rim is elastically deformable rather than the head of the screw.

The embodiments shown in Figures 1-24 of Campbell et al. have been dismissed in the discussion herein because these embodiments require an additional instrument to move the stopping member after the head of the screw passes the stopping member. Moreover, the embodiments found in Figures 1-24 have other features which move these embodiments well away from applicants' invention.

The embodiment shown in Figures 25-27 of Campbell has a deformable head and while the deformable head has head elements (142) which are deformed from a first configuration to a second configuration by the locking rim, the deformed head elements of the Campbell et al. device do not return to the first configuration as called for in applicants' new claim 121, they remain deformed.

With respect to the third embodiment referred to in column 8, lines 19-21 but not shown in the drawings, the locking rim is elastically deformable and the head of the

screw is not. This would require the locking rim to deform upwardly and outwardly so the combined screw head and plate assembly would not look as it does in Figure 27. Importantly, the locking rim (stopping member) would not return to its first configuration after the head of the screw passes into the bore because the head is not deformable. As noted above, new claims 120, 122 and 125 call for the stopping member to be deformed by the head of the screw and to return to the first configuration after deformation. The Campbell et al embodiments do not do that.

With respect to applicants new claim 125, this claim calls for the stopping member to have a posterior stopping surface and the enlarged integral portion of the securing element to have an anterior surface which is configured to engage the posterior stopping surface after the enlarged integral portion passes the stopping member and the stopping member returns to the first configuration so as to prevent the enlarged portion of the securing element from backing out of the posterior bore portion and to facilitate retention of the enlarged integral portion within the posterior bore portion. The device described by Campbell et al. (Col. 8, lines 19-21) calls for a locking rim but the locking rim would not engage an anterior surface of the securing member.

It should also be noted as an aside that the same force used to push the head of the Campbell et al. screw within the bore of the bone plate could remove the head from the bone plate because there is no true locking function in the embodiment shown in Figs. 25-27 of Campbell et al. There is just merely resistance to moving within the passageway.

Conclusions

Applicants have included herewith a listing of all claims, including the claims

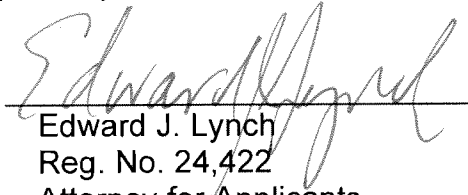
present in the original patent and a Mark-Up Of Amended Claims which indicates the changes made to the claims in the new amended claim pages.

Applicants have also included a chart pursuant to 37 C.F.R. §1.173(c) listing the status and support for the all claims not found in the issued patent and amendments thereto.

Applicants believe that the pending claims define patentable subject matter. Further consideration pursuant to the concurrently filed RCE is requested along with an early allowance.

Respectfully submitted:

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MARK-UP OF AMENDED CLAIMS

1. (Twice Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration [and a posterior stopping surface]; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the [biased] stopping member and greater than the second opening in the stabilizing element, so that the head is retained [by the posterior stopping surface of the stopping member] within the transverse passageway between the [biased] stopping member and the second opening in the stabilizing element.
29. (Cancelled)
30. (Thrice Amended) The attachment assembly of claim 120 wherein [the stopping member has]

the [second] first configuration of the stopping member has inner transverse dimensions that are smaller than transverse dimensions of the enlarged

integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and

the [first] second configuration of the stopping member has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.

31. (Amended) The attachment assembly of claim [29] 120 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

36. (Cancelled)

37. (Thrice Amended) The attachment assembly of claim [36] 120 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension by the passage of the enlarged integral portion of the securing member therethrough.

43. (Amended) The attachment assembly of claim [29] 120 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim [29] 120 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim [29] 120 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim [29] 120 wherein the attachment member is selected from the group consisting of rods and plates.

60. (Amended) The attachment assembly of claim [29] 120, wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
- b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

63. (Thrice Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion; and
- c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing member disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore

which has smaller transverse dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the stabilizing element [by the posterior stopping surface of the stopping member].

89. (Cancelled)

90. (Amended) The assembly of claim [89] 120 wherein the [radially deflectable member] stopping element comprises a biased collar.

91. (Thrice Amended) The assembly of claim 90 wherein the biased collar is elastically deformable to the [first] second configuration.

92. (Cancelled)

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element [so that the enlarged integral portion of the securing element is retained within the posterior bore portion].

94. (Cancelled)

95. (Thrice Amended) The orthopedic implant assembly of claim [94] 121 wherein the biased enlarged portion of the securing element comprises at least one resilient [longitudinally deflectable] member that deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Cancelled)

98. (Thrice Amended) The orthopedic implant assembly of claim [96] 125 wherein the biased stopping member elastically returns from the first configuration back to the second configuration.

99. (Amended) The assembly of claim [96] 125 wherein the biased stopping

member comprises a collar.

102. (Thrice Amended) The attachment assembly of claim [29] 120, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

104. (Cancelled)

105. (Amended) The attachment assembly of clam [104] 120 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

107. (Cancelled)

108. (Amended) The assembly of claim [107] 121 wherein the [compressible part of the] biased enlarged [integral] portion of the securing element comprises a biased collar.

109. (Cancelled)

110. (Cancelled)

111. (Amended) The assembly of claim [107] 121 wherein the compressible part of the enlarged [integral] portion of the securing element comprises at least one circumferentially disposed member.

112. (Amended) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the shaft of the securing element.

113. (Amended) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends

secured to the shaft of the securing element.

114. (Amended) The orthopedic attachment assembly of claim [29] 120 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing [member] element so that the enlarged integral portion of the securing [member] element is longitudinally displaceable within the posterior bore portion when retained therein.

115. (Amended) [An] The orthopedic attachment assembly of claim 120 wherein, [comprising:]

- a. [an] the elongated securing [member having] element has an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;
- b. [an] the attachment [member] element [which] has an anterior surface and a posterior surface and [which] has at least one bore extending through the attachment [member] element from the anterior surface to the posterior surface and is configured to receive the securing [member] element, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing [member] element to retain the enlarged integral portion of the securing [member] element within the posterior bore portion; and

- c. [[a]] the stopping member [which has a posterior stopping surface, a first configuration that allows the enlarged integral portion of the securing member to pass into the posterior bore portion and a second configuration that facilitates retention of the enlarged integral portion of the securing member within the posterior bore portion by the posterior stopping surface and which] defines at least in part a length of the posterior bore portion that is longer than the length of the enlarged integral portion of the securing [member] to allow longitudinal displacement of the enlarged integral portion of the securing member within the posterior bore portion.

116. (Amended) The orthopedic attachment assembly of claim 115 wherein the securing member has a portion posterior to the enlarged integral [head] portion that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing member within the posterior bore portion.

117. (Amended) The orthopedic attachment assembly of claim 115 wherein the [first] second configuration of the stopping member has a transverse dimension that is larger than the transverse dimension of the stopping member [is] in the [second] first configuration.

120. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged integral portion with a length, an anterior surface, a posterior surface and a transverse dimension;

- b. an attachment element which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment element from the anterior surface to the posterior surface and is configured to receive the securing element, the bore having an anterior bore portion, and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing element to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and
 - c. a biased stopping member which has a posterior stopping surface, a first configuration which extends within the bore that is elastically deformed to a second configuration as the enlarged portion of the securing member passes into the posterior bore portion, the biased stopping member returning to the first configuration upon passage of the enlarged integral portion into the posterior bore portion, the posterior stopping surface of the biased stopping member configured to engage with the anterior surface of the enlarged integral portion of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.
121. (New) An orthopedic attachment assembly, comprising:
- a. an elongated securing member having a biased enlarged portion with a length, an anterior surface, a posterior surface and a transverse dimension;

- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the biased enlarged portion of the securing member to facilitate retention of the enlarged portion of the securing member within the posterior bore portion; and
- c. a stopping member which has an anterior surface, and a posterior stopping surface which extends within the bore;
- d. the biased enlarged portion of the securing member is elastically deformed from a first configuration to a second configuration as the biased enlarged portion passes the stopping member during the passage of the biased enlarged portion of the securing member into the posterior bore portion of the attachment member, the biased enlarged portion of the securing member returning to the first configuration after passage of the biased enlarged portion into the posterior bore portion of the attachment member, engagement of the posterior stopping surface of the stopping member with the anterior surface of the biased enlarged portion of the securing member facilitating retention of the biased enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

122. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing element having an enlarged portion with a length, an anterior surface a posterior surface and a transverse dimension;
- b. an attachment which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member; and
- c. a plurality of biased stopping members that are part of the attachment member which have posterior stopping surfaces, a first configuration that extend within the bore and that are elastically deformed by the passage of the enlarged portion of the securing member to a second configuration to allow passage of the enlarged portion of the securing member into the posterior bore portion, the biased stopping members returning to the first configuration upon passage of the enlarged portion and the posterior stopping surfaces configured to engage the anterior surface of the securing member facilitating retention of the enlarged portion of the securing member within the posterior bore portion of the attachment member.

123. (New) The orthopedic implant assembly of claim 122 wherein the stopping element comprises one or more contractible fingers.

124. (New) The orthopedic implant assembly of claim 122 wherein the plurality

of biased stopping members comprise resilient longitudinally deflectable members which have first un-deflected configurations within the anterior bore portion and deflected configurations which allow the enlarged integral head of the securing member to pass into the posterior bore portion, the one or more deflectable members having posterior surfaces that are configured to engage an anterior surface of the enlarged integral head of the securing member to prevent the back-out of the integral head of the securing element from the posterior bore of the stabilizing element and facilitate retention of the enlarged integral head of securing element within the posterior bore portion.

125. (New) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
 - b. a securing element having an elongated body and an enlarged integral portion having an anterior surface; and
 - c. a biased stopping member which has a posterior stopping surface, which has a first configuration within the anterior bore portion that has a first transverse dimension and is elastically deformable to a second configuration within the anterior bore portion that has a second transverse dimension larger than the first transverse dimension that allows the

enlarged integral portion of the securing element to pass into the posterior bore portion posterior to the biased stopping member, the biased stopping member returning to the first configuration so that the posterior surface of the stopping member is positioned to engage the anterior surface of the securing element and prevents the securing element from backing out of the posterior bore portion and to facilitate retention of the enlarged integral portion of the securing element within the posterior bore portion.

126. (New) The assembly of claim 120 wherein at least one of the anterior surface of the head and the posterior stopping surface of the stopping member are perpendicular to the longitudinal axis of the bore.

**Status And Support For All Claims Not Found In Issued Patent
And Amendments Thereto Pursuant To 37 CFR §1.173(c)**

Claims	Status	Support (Ref. to Issued Patent)
Claim 1	Twice Amended	Col. 4 lines 48-55 (amendment)
Claim 2	Original	
Claim 3	Original	
Claim 4	Original	
Claim 5	Original	
Claim 6	Original	
Claim 7	Original	
Claim 8	Original	
Claim 9	Original	
Claim 10	Original	
Claim 11	Original	
Claim 12	Original	
Claim 13	Original	
Claim 14	Original	
Claim 15	Original	
Claim 16	Original	
Claim 17	Original	
Claim 18	Original	
Claim 19	Original	
Claim 20	Original	
Claim 21	Original	
Claim 22	Original	
Claim 23	Original	
Claim 24	Original	
Claim 25	Original	
Claim 26	Original	
Claim 27	Original	
Claim 28	Original	
Claim 29	Cancelled	Cancelled
Claim 30	Thrice Amended	Figs. 3-5; Col. 4, line 64, Col. 5, line 30

Claims	Status	Support (Ref. to Issued Patent)
Claim 31	Amended	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled	Cancelled
Claim 33	Pending	Fig. 5; Col.5, lines 59-67
Claim 34	Pending	Figs. 1-6
Claim 35	Pending	Figs. 1-6
Claim 36	Cancelled	Cancelled
Claim 37	Thrice Amended	Fig. 4; Col.1, lines 45-47; Col. 5, lines 2-15
Claim 38	Pending	Figs. 3-5; Col.4, lines 31-33
Claim 39	Pending	Figs. 2-5
Claim 40	Pending	Fig. 13
Claim 41	Cancelled	Cancelled
Claim 42	Pending	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Amended	Fig. 1
Claim 44	Amended	Fig. 1; Col. 7, lines 52-57
Claim 45	Amended	Col. 7, lines 47-57
Claim 46	Amended	Col. 7, lines 49-52
Claim 47	Pending	Col. 2, lines 6-8
Claim 48	Pending	Col. 6, lines 1-3
Claim 49	Pending	Col. 6, lines 1-3
Claim 50	Pending	Figs. 2-6
Claim 51	Pending	Figs. 3-5
Claim 52	Twice Amended	Col. 2, lines 19-46
Claim 53	Pending	Col. 2, lines 61-67
Claim 54	Twice Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 55	Pending	Figs 8 and 10; Col. 6, lines 31-50
Claim 56	Pending	Figs. 7-12
Claim 57	Pending	Figs. 7, 8 and 10
Claim 58	Pending	Figs. 8, 10 and 12
Claim 59	Pending	Figs. 7-12; Col. 2, lines 46-60
Claim 60	Amended	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled	Cancelled
Claim 62	Cancelled	Cancelled
Claim 63	Thrice Amended	Figs. 1-6; Col. 4, line 13, Col. 6, line16; Figs. 13-15; Col. 5, lines 51-59

Claims	Status	Support (Ref. to Issued Patent)
Claim 64	Pending	Col. 5, lines 21-30
Claim 65	Twice Amended	Col. 5, lines 15-20
Claim 66	Pending	Col. 5, lines 2-8
Claim 67	Pending	Col. 5, lines 30-33
Claim 68	Pending	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Pending	Fig. 4; Col. 5, lines 2-8
Claim 70	Twice Amended	Fig. 4; Col. 5, lines 2-8
Claim 71	Pending	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Pending	Fig. 14
Claim 73	Pending	Fig. 14
Claim 74	Pending	Fig. 6; Col 5, lines 46-67
Claim 75	Pending	Fig. 1; Col 7, lines 62-67
Claim 76	Pending	Fig. 1; Col 7, lines 52-57
Claim 77	Pending	Col. 7, lines 52-57
Claim 78	Pending	Col. 7, lines 49-52
Claim 79	Pending	Col. 2, lines 6-8
Claim 80	Cancelled	Cancelled
Claim 81	Cancelled	Cancelled
Claim 82	Cancelled	Cancelled
Claim 83	Cancelled	Cancelled
Claim 84	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 85	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 86	Pending	Figs.13-15; Col. 5, lines 51-59
Claim 87	Cancelled	Cancelled
Claim 88	Pending	Figs. 8, 10 and 12
Claim 89	Cancelled	Cancelled
Claim 90	Amended	Fig. 3; Col. 1, lines 42-55
Claim 91	Thrice Amended	Fig. 3; Col. 1, lines 42-55
Claim 92	Cancelled	Cancelled
Claim 93	Amended	Col.2, lines 61-67
Claim 94	Cancelled	Cancelled
Claim 95	Thrice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Cancelled	Cancelled
Claim 97	Cancelled	Cancelled

Claims	Status	Support (Ref. to Issued Patent)
Claim 98	Thrice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67, Figs. 2-6; Col. 4, line 13, Col. 6, line16
Claim 100	Pending	Figs. 7-12; Col. 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 101	Pending	Figs. 7-12; Col. 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6; lines Col. 4, line 13, Col. 6, line16
Claim 102	Thrice Amended	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Cancelled	Cancelled
Claim 104	Cancelled	Cancelled
Claim 105	Amended	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Pending	Figs. 5-6, lines 51-67
Claim 107	Cancelled	Cancelled
Claim 108	Amended	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	Cancelled	Cancelled
Claim 110	Cancelled	Cancelled
Claim 111	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 112	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 113	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 114	Amended	Fig. 5; Col. 5, lines 46-51
Claim 115	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 116	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 117	Amended	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 118	Pending	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 119	Pending	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22
Claim 120	New	Figs. 1-6; Col. 1, line 42, Col.2, line 45, Col. 4, line 8, Col. 6, line 16
Claim 121	New	Figs. 7-12; Col. 2, lines 46-67, Col. 6, lines 1-54
Claim 122	New	Figs. 13-15; Col. 4, lines 18-23, Col. 6, line 55, Col. 7, line 22
Claim 123	New	Co. 4, lines 18-23
Claim 124	New	Figs. 13-15; Col. 6, line 55, Col. 7, line 22

Claims	Status	Support (Ref. to Issued Patent)
Claim 125	New	Figs. 1-6; Col. 1, line 42, Col.2, line 45, Col. 4, line 8, Col. 6, line 16
Claim 126	New	Figs. 1-6; Col. 1, line 42, Col.2, line 45, Col. 4, line 8, Col. 6, line 16

Applicant Initiated Interview Request Form

Application No.: **10/620,154** First Named Applicant:- **David Talaber**
 Examiner: **Anuradha Ramana** Art Unit: **3775** Status of Application: **Pending**

Tentative Participants:

(1) **Edward J. Lynch** (2) **Anuradha Ramana**
 (3) **Thomas Barrett** (4)

Proposed Date of Interview: **March 2, 2010** Proposed Time: **1 PM**

Type of Interview Requested:

(1) ☐ Telephonic (2) ☒ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☐ NO

If yes, provide brief description: .

Issues To Be Discussed

Issues ((Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) Rej. \$102	_____	Dill	☐	☐	☐
(2) Rej. \$102	_____	Campbell et al.	☐	☐	☐
(3) _____	_____	_____	☐	☐	☐
(4) _____	_____	_____	☐	☐	☐

☐ Continuation Sheet Attached

☒ Proposed Amendment or Arguments Attached

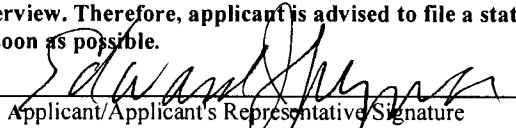
Brief Description of Arguments to be Presented:

Applicants have added new claims and amended pending claims to avoid Dill and Campbell et al. references and to avoid Section 112(1)(2) rejections.

An interview was conducted on the above-identified application on _____.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.


 Applicant/Applicant's Representative Signature

 Examiner/SPE Signature

Edward J. Lynch

Typed/Printed Name of Applicant or Representative

24,422

Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Patent Application Fee Transmittal				
Application Number:		10620154		
Filing Date:		15-Jul-2003		
Title of Invention:		Orthopedic implant assembly		
First Named Inventor/Applicant Name:		David J. Talaber		
Filer:		Edward J. Lynch/Ruth Der		
Attorney Docket Number:		R0372-00101		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	2801	1	405	405
Total in USD (\$)				405

Electronic Acknowledgement Receipt	
EFS ID:	7081886
Application Number:	10620154
International Application Number:	
Confirmation Number:	8486
Title of Invention:	Orthopedic implant assembly
First Named Inventor/Applicant Name:	David J. Talaber
Correspondence Address:	EDWARD J LYNCH PATENT ATTORNEY One Embarcadero Center Suite 562 San Francisco CA 94111 US 415-646-8028 -
Filer:	Edward J. Lynch/Ruth Der
Filer Authorized By:	Edward J. Lynch
Attorney Docket Number:	R0372-00101
Receipt Date:	24-FEB-2010
Filing Date:	15-JUL-2003
Time Stamp:	18:16:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 405

RAM confirmation Number	5741				
Deposit Account	504358				
Authorized User					
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RCE.pdf	32108	no	2
			693d51ddadb1695b0f8d67df501e3dfef71debcc		
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	amendmentreponse.pdf	828846	no	36
			4a35893d1be8a60b198392761de5d820cc7f0796		
Warnings:					
Information:					
3	Amendment Submitted/Entered with Filing of CPA/RCE	markupamendclaims.pdf	89519	no	12
			86791bda2f79ad625fcb9e9edd8a8d61197f3e80		
Warnings:					
Information:					
4	Amendment Submitted/Entered with Filing of CPA/RCE	statusandsupport.pdf	64795	no	5
			a4d73d12d3486e83667a632f5c9b140856fbba99		
Warnings:					
Information:					
5	Letter Requesting Interview with Examiner	interviewrqst.pdf	29698	no	1
			409f3818300feffe93504ef080bb10cdd7cf9a5a		
Warnings:					
Information:					
6	Fee Worksheet (PTO-875)	fee-info.pdf	29757	no	2
			4f78a011128cf68448b6ad14eb68af5df41505ff		
Warnings:					
Information:					
Total Files Size (in bytes):			1074723		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

FEB 18 2010

PTO/SB/122 (11-08)

Approved for use through 11/30/2011. OMB 0651-0035

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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**CHANGE OF
CORRESPONDENCE ADDRESS
Application**Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/620,154
Filing Date	July 15, 2003
First Named Inventor	David Talaber
Art Unit	3775
Examiner Name	Anuradha Ramana
Attorney Docket Number	ACANP-00101

Please change the Correspondence Address for the above-identified patent application to:

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I am the:

- ☐ Applicant/Inventor
- ☐ Assignee of record of the entire interest.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
- ☒ Attorney or agent of record. Registration Number 24.422
- ☐ Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number _____

Signature

Typed or Printed
Name

Edward J. Lynch

Date

2/18/10

Telephone

415 391 9300

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 1 forms are submitted.

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FEB 18 2010

EDWARD J. LYNCH
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Four Embarcadero Center
Suite 1700
San Francisco, CA 94111

Telephone: 415.391.9300
Fax: 415.391.9304
E-mail: elynch@lynchiplaw.com

FACSIMILE

To:	Commissioner for Patents
Company:	USPTO
Fax:	571 273 8300
From:	Ruth Der, IP Administrator
Telephone:	415 391.9303
Fax:	415 391 9304
Date:	February 18, 2010
Re:	<i>Change of Correspondence Address Application</i>
Pages: (including coversheet)	2
Message:	Attached is <i>Change of Correspondence Address (form PTO/SB/122)</i> of U.S. Reissue Patent Appln. No. 10/620,154.

Please confirm receipt of this facsimile.

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**CHANGE OF
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Application**Address to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	10/620,154
Filing Date	July 15, 2003
First Named Inventor	David J. Talaber
Art Unit	3775
Examiner Name	Anuradha Ramana
Attorney Docket Number	ACANP-00101

Please change the Correspondence Address for the above-identified patent application to:

☒ The address associated with
Customer Number:

90045

OR

☐ Firm or
Individual Name EDWARD J. LYNCH, Patent AttorneyAddress Four Embarcadero Center
Suite 1700

City San Francisco

State
California

Zip 94111

Country USA

Telephone 415 391 9300

Email
elynych@lynchiplaw.com

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I am the:

- ☐ Applicant/Inventor
- ☐ Assignee of record of the entire interest.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
- ☒ Attorney or agent of record. Registration Number 24,422
- ☐ Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number _____

Signature

Typed or Printed
Name

Edward J. Lynch

Date

Feb 4, 2010

Telephone

415 391 9300

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

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FEB 04 2010

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E-mail: elynch@lynchiplaw.com

FACSIMILE

To:	Commissioner for Patents
Company:	USPTO
Fax:	571 273 8300
From:	Ruth Der, IP Administrator
Telephone:	415 391.9300
Fax:	415 391.9304
Date:	February 4, 2010
Re:	<i>Change of Correspondence Address - Application</i>
Pages: (including coversheet)	2
Message:	Attached is <i>Change of Correspondence Address</i> of application Serial No. 10/620,154 .

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 12/07/2009
EDWARD J LYNCH
PATENT ATTORNEY
One Embarcadero Center
Suite 562
San Francisco, CA 94111

EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

3775

MAIL DATE	DELIVERY MODE

12/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31, 33-40, 42-60, 63-79, 84-86, 88-96, 98-102, and 104-119 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-28, 52-59, 84-86, 88 and 107-113 is/are allowed.
- 6) ☒ Claim(s) 1-20, 29-31, 33-51, 60, 63-79, 89-96, 98-102, 104-106 and 114-119 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)	5) ☐ Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 117 is objected to because of the following informalities.

In claim 117, line 3, "is" should be "in" to correct a minor typographical error.

In claim 117, it is suggested that transverse dimension in the first configuration be qualified using "first" and the transverse dimension in the second configuration be qualified using "second" to avoid confusion.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20, 51, 74-79, and 89-93 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the recitation "so that the head is retained by the posterior stopping surface of the stopping member" seeks to introduce new matter. The word "by" seems to imply that the posterior stopping surface of the stopping member is retaining the head of the securing element. The stopping surface only prevents screw back-out.

Similar comments apply to claim 89.

It is noted that Applicant's disclosure, as originally filed, shows the head to be retained between the posterior stopping surface of the biased stopping member and the second opening in the stabilizing element or the posterior bore portion of the attachment member.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20, 29-31, 33-40, 42-51, 60, 63-79, 89-102, 104-106 and 114-119 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the recitation "by the posterior stopping surface of the stopping member within the transverse passageway between the biased stopping member and the second opening in the stabilizing element" renders the claim vague and indefinite since this amounts to double inclusion. Similarly, in claim 29, the recitation "by the posterior stopping surface of the stopping member" renders the claim vague and indefinite since this amounts to double inclusion.

Similarly, in claim 63, the recitation "by the posterior stopping surface of the stopping member" renders the claim vague and indefinite since this amounts to double inclusion.

Similarly in claim 89, the recitation "by the posterior stopping surface" renders the claim vague and indefinite since this amounts to double inclusion.

Similarly in claim 96, the recitation "by the stopping surface" renders the claim vague and indefinite since this amounts to double inclusion.

The head in the device of applicant's invention is retained in the transverse passageway or posterior bore portion between the posterior surface of the stopping member and the second opening.

In claim 115, the recitation "and which defines at least in part a length..." renders the claim vague and indefinite since it is unclear what structure is being referred to by "which defines". It is suggested that the recitation be modified, for e.g., "the posterior bore portion being longer than the length of the enlarged integral portion of the securing member to allow displacement of the enlarged integral portion of the securing member within the posterior bore portion."

In claim 118, "the second transverse dimension" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 89-95, 115 and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by Dill (US 5,118,235).

Dill discloses a stabilizing element 10 having an anterior surface, a posterior surface and at least one bore 56 having an anterior bore portion and a posterior bore portion, the posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion; a resilient radially deflectable member or biased collar 90; and a screw or "securing element" 12 having an elongated body 30 with a head 24 integral with the body, the head having a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion (Figs. 1, 3-4 and 7, col. 3. lines 58-68, col. 4 and col. 5, lines 1-64).

Regarding claim 92, the first configuration or expanded or unrestrained configuration of the collar is the position shown in Fig. 3.

Regarding claim 115, the first configuration of the biased collar 90 is the position shown in Fig. 3 (col. 4, lines 43-47) and the second configuration is the position shown in Figs. 4 and 7 (col. 4, lines 48-59).

Regarding the recitation, "An orthopedic implant assembly" it is noted that if the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of

the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation") (per MPEP 2111.02).

Claims 89-95 are rejected under 35 U.S.C. 102(e) as being anticipated by Campbell et al. (US 6,258,089).

Campbell et al. disclose an orthopedic implant assembly including: a plate or stabilizing element 106, the stabilizing element having a bore 120a with a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion; a securing element 132 having an elongated body and an enlarged integral portion 138, portion 138 having a transverse dimension greater than a transverse dimension of the posterior opening; a resilient radially deflectable member 112 that allows the securing element 132 to pass into the posterior bore portion in a first or expanded configuration (Fig. 23) and a second configuration in which the enlarged integral portion of the securing element is retained in the posterior bore portion (Figs. 23-26, and col. 7, lines 27-65).

Response to Arguments

Applicant's arguments submitted under "REMARKS" in the response filed on May 27, 2008 have been fully considered.

Applicant's amendments to claims 52 and 54 overcome the rejections under 35 USC 112 second paragraph.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

It is noted that upon further consideration, claims 89-95, and 115-116 have been rejected under 35 USC 102(b) over Dill. As discussed in this office action, Dill discloses all elements of Applicant's claimed invention, thereby anticipating the claimed invention.

The preamble "orthopedic implant assembly" or "orthopedic attachment assembly" has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause.

Allowable Subject Matter

Claims 29-31, 33-40, 42-50, 60, 63-73, 96, 98-102, 104-106, and 114 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 21-28, 52-59, 84-86, 88 and 107-113 are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3775

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Barrett can be reached at (571) 272-4746. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR
December 6, 2009

/Anu Ramana/
Primary Examiner, Art Unit 3775

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
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	1	=		✓	✓				
	2	=		✓	✓				
	3	=		✓	✓				
	4	=		O	✓				
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	6	=		O	✓				
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	25	=		=	=				
	26	=		=	=				
	27	=		=	=				
	28	=		=	=				
	29			✓	✓				
	30			✓	✓				
	31			✓	✓				
	32			-	-				
	33			✓	✓				
	34			✓	✓				
	35			✓	✓				
	36			✓	✓				

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
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<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
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	107			=	=					
	108			=	=					

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	03/03/2008		03/09/2008	12/06/2009				
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	116				✓				
	117				✓				
	118				✓				
	119				✓				

Search Notes 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Search.	3/9/2008	A.Ramana
Updated Search.	12/6/2009	A. Ramana

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

EDWARD J. LYNCH

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Tel: 415.646.8028

Fax: 415.646.8035

E-mail: elynch@m-diplaw.com

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JAN 29 2009**FACSIMILE**

To:	Examiner Anuradha Ramana
Company:	Mail Stop Reissue
Fax:	571 273 8300
From:	Ruth Der, Paralegal
Telephone:	415 646 8029
Fax:	415 646.8035
Date:	January 29, 2009
Re:	Serial No. 10/620,154; Atty. Docket No. ACANP-00101
Pages: (including coversheet)	3
Message:	Attached is <i>Status Inquiry</i> .

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Examiner: Anuradha Ramana

Group Art Unit: 3733

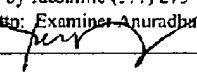
Atty. Docket No.: ACANP-00101

TRANSMITTAL

Filed: July 15, 2003

CERTIFICATE OF TRANSMISSION PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Atty. Examiner Anuradha Ramana on January 29, 2009 in San Francisco, CA.

By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

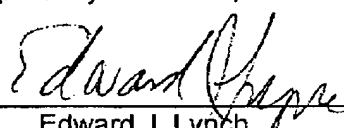
1. Transmitted herewith for filing in the above-identified patent application is the following:

X Status Inquiry.

2. Payment of Fees

X The Commissioner is authorized to charge the fees, the deficiency in payment and/or to credit any overpayment of fees which may be required under 37 C.F.R. \$1.16 or \$1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
Patent Attorney
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San Francisco, CA 94111
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Fax: (415) 646.8035

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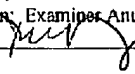
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3733
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT ASSEMBLY	)	<u>STATUS INQUIRY</u>
Filed: July 15, 2003	)	

CERTIFICATE OF TRANSMISSION PURSUANT TO 37 CFR 1.8

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By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

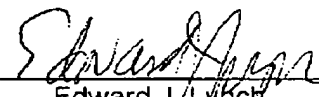
Dear Sirs:

Applicants hereby inquire into the status of the present reissue application.

This reissue application was filed on July 15, 2003. The Patent Office mailed on July 3, 2008 a Notice of Non-Compliant Amendment (form PTOL-324), contending that applicant did not provide the proper claim identifiers in their response filed May 27, 2008. On July 9, 2008, Applicants filed their Communication stating that the present application herein is a reissue application which does not require such claim identifiers and in all appearances, the Notice was sent to applicants in error. To date, applicants have received no further communication from the Patent Office. Therefore, applicants request the status of the present reissue application.

Applicants believe that there is no fee due with this communication. However, the Commissioner is authorized to charge the fees, the deficiency in payment, and/or to credit any overpayment which may be required pursuant to 37 CFR §1.16 and §1.17 to Deposit Acct. No. 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted:

By: 

Edward J. Lynch

Reg. No. 24,422

Attorney for Applicants

EDWARD J. LYNCH
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E-mail: elynch@m-diplaw.com

FACSIMILE

To:	Examiner Anuradha Ramana
Company:	Mail Stop Reissue
Fax:	571 273-8300
From:	Ruth Der, Paralegal
Telephone:	415 646 8029
Fax:	415 646.8035
Date:	July 9, 2008
Re:	Reissue Serial No. 10/620,154; Atty. Docket No. ACANP-00101
Pages: (including coversheet)	5
Message:	Attached are <i>Communication</i> and copy of <i>Notice Of Non-Compliant Amendment (37 CFR 1.121)</i> mailed 07/03/2008.

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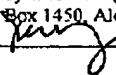
JUL 09 2008

PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	
Issued: July 17, 2001	)	Group Art Unit: 3733
Inventors: Talaber et al.	)	
Reissue Serial No.: 10/620,154	)	Atty. Docket No.: ACANP-00101
For: ORTHOPEDIC IMPLANT	)	
ASSEMBLY	)	<u>TRANSMITTAL</u>
	)	
Filed: July 15, 2003	)	

CERTIFICATE OF TRANSMISSION PURSUANT TO 37 CFR 1.8

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By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

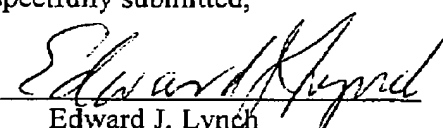
1. Transmitted herewith for filing in the above-identified patent application are:

X Communication including;
X Copy of Notice of Non-Compliant Amendment (37 CFR 1.121) mailed 07/03/2008.

2. Payment of Fees

X Applicants believe that there is no fee due with this communication. However, the Commissioner is authorized to charge the fees, the deficiency in payment and/or to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted,

By: 

Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
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San Francisco, CA 94111
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Facsimile: (415) 646.8035

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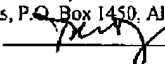
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for) Examiner: Anuradha Ramana
Patent No.: 6,261,291) Group Art Unit: 3733
Issued: July 17, 2001) Attorney Docket No.: R0372-00101
Inventors: Talaber et al.)
Reissue Serial No.: 10/620,154)
For: **ORTHOPEDIC IMPLANT**)
ASSEMBLY)
Filed: July 15, 2003)

COMMUNICATION

CERTIFICATE OF TRANSMISSION PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Attention: Examiner Anuradha Ramana, Mail Stop REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 9, 2008 in San Francisco, CA.

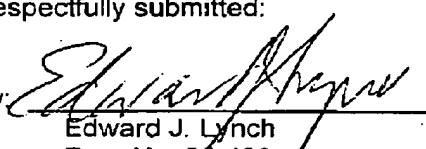
By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In the above-referenced application, the Patent Office mailed the attached Notice of Non-Compliant Amendment (37 CFR §1.121) for failure to provide proper status identifier pursuant to 37 CFR §1.121. It appears that the Notice was mailed in error. The present application is a reissue application. Applicants believe that their amendment and response as filed May 27, 2008 was in compliance with 37 CFR §1.173(b)(2)(c)(d) regarding amendment to reissue claims.

Respectfully submitted:

By: 

Edward J. Lynch
Reg. No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
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www.uspto.gov

07/03/2008

EDWARD J LYNCH
PATENT ATTORNEY
One Embarcadero Center
Suite 562
San Francisco, CA 94111

Paper No.

Application No.:	10/620,154 	Date Mailed:	07/03/2008
First Named Inventor:	Talaber, David, J.	Examiner:	RAMANA, ANURADHA
Attorney Docket No.:	R0372-00101	Art Unit:	3733
Confirmation No.:	8486	Filing Date:	07/15/2003

Please find attached an Office communication concerning this application or proceeding.

JUL 09 2008

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 10/620,154	Applicant(s) TALABER ET AL.
		Art Unit 1700

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

The amendment document filed on 27 May, 2008 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
 - ☐ B. New paragraph(s) should not be underlined.
 - ☐ C. Other _____
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
 - ☐ B. Other _____
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - ☐ C. Other _____
- ☒ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
 - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - ☒ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
 - ☐ E. Other: _____
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4): For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance, or a drawing submission (only) If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1 to 4 are checked, the correction required is only the corrected section of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action.

Failure to timely respond to this notice will result in:

- Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action; or
- Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable /FELICIA FARMER/

Telephone No: (571)272-1005

U.S. Patent and Trademark Office
PTOL-324 (04-06)

Notice of Non-Compliant Amendment (37 CFR 1.121)

Part of Paper No. 20080702-1



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San Francisco, CA 94111

Paper No.

Application No.:	10/620,154 	Date Mailed:	07/03/2008
First Named Inventor:	Talaber, David, J.	Examiner:	RAMANA, ANURADHA
Attorney Docket No.:	R0372-00101	Art Unit:	3733
Confirmation No.:	8486	Filing Date:	07/15/2003

Please find attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
		Art Unit 1700	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 27 May, 2008 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
 - ☐ A. Amended paragraph(s) do not include markings.
 - ☐ B. New paragraph(s) should not be underlined.
 - ☐ C. Other _____.
- ☐ 2. Abstract:
 - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
 - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
 - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - ☐ C. Other _____.
- ☒ 4. Amendments to the claims:
 - ☐ A. A complete listing of all of the claims is not present.
 - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - ☒ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
 - ☐ E. Other: _____.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4): For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance, or a drawing submission (only) If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1 to 4 are checked, the correction required is only the corrected section of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable /FELICIA FARMER/

Telephone No: (571)272-1005

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 10/620,154		Filing Date 07/15/2003		☐ To be Mailed	
APPLICATION AS FILED – PART I										
(Column 1)			(Column 2)		SMALL ENTITY ☐		OR		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)				
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A		N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A		N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A		N/A					
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$	=	OR	X \$	=			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$	=		X \$	=			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL				
APPLICATION AS AMENDED – PART II										
(Column 1)			(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT	05/27/2008	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))	* 108	Minus	** 106	= 2	X \$ =	OR	X \$50=	100	
	Independent (37 CFR 1.16(h))	* 15	Minus	*** 16	= 0	X \$ =	OR	X \$210=	0	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	100
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =	OR	X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =	OR	X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

Legal Instrument Examiner:
/FELICIA FARMER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Filed: July 15, 2003

) Examiner: Anuradha Ramana
)
) Group Art Unit: 3733
)
) Attorney Docket No.: ACANP-00101
)

RESPONSE TO OFFICE ACTION
MAILED 03/19/2008

EXPRESS MAIL Label No.: EB 522969529 US
Mailed in San Francisco, CA on May 27, 2008

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In response to the non-final Office Action mailed on March 19, 2008, please replace the amended claim pages with the following new claim pages. A marked up copy of the amended claims indicating the changes made thereto is attached for the convenience of the Examiner.

05/28/2008 HVUONG1 00000042 504358 10620154

01 FC:1202 100.00 DA

REMARKS

Personal Interview with the Examiner

Applicants wish to thank the Examiner for the courtesies extended during the personal interview held on May 6, 2008.

During the above referenced interview, the Examiner indicated that favorable reconsideration might be possible if the position of the head or enlarged integral portion of the securing member was defined as being within the posterior bore portion posterior to the stopping member. Applicants have clarified the un-allowed claims to call for the stopping member to have a posterior stopping surface which retains the head or enlarged integral portion of the securing member within the posterior bore portion posterior to the stopping member.

Response to Claim Rejections Under 35 USC §112

Claims 52-58 were rejected by the Examiner under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner indicated that "the securing member" found in claim 52 and "the securing element" found in claim 54 lack antecedent bases. In response applicants have amended claims 52 and 54 to avoid this rejection.

Response to Claim Rejections Under 35 USC §102

Claims 1-3, 9-11, 16-17 and 19 were rejected by the Examiner under 35 USC §102(b) as being anticipated by Dill (U.S. Pat. No. 5,118,235). The Examiner contends that this reference describes a biased stopping member 80. However, the curved lip 80,

which the Examiner identifies as a biased stopping member, is not disclosed as being biased or a stopping member as these terms are used in applicants' application. Specifically, the lip 80 is described as a locking element for flap 90. The flap is flexible and is configured to act as a stop for the screw head (24) (col. 5, lines 40-51) not the lip 80 as contended by the Examiner. Moreover, the Dill patent is silent as to a stopping member defining at least in part a reversibly expandable passageway having a larger diameter configuration to allow the head of the securing member to pass into the posterior bore portion and a smaller diameter configuration to facilitate retention of the head of the securing member within the posterior bore portion. The Examiner cites column 3, line 33 to column 4, line 16 of the Dill patent for support, but the cited section does not mention the lip 80 and provides no teaching which relates to the lip 80. The flap 90 is described as being flexible and acting as a stopping member, but the flap closes off the passageway so it could not define at least in part a reversible expandable passageway as called for in claim 1.

Applicants believe that the Examiner has looked at Fig. 7 alone in rejecting claims 1-3, 9-11, 16-17 and 19 when Figs. 1-6 should also have been considered, particularly Fig. 6. Fig. 6 shows that the anterior opening in the washer is longer than its width. The head of the screw could be anywhere within the opening and the transverse cross section shown in Fig. 7 would not define the position of the screw head within the washer. Moreover, in view of the tapered posterior surface of the screw head, the head of the screw would very likely be urged sideways in the event that the underside engages the upper surface of the element 80. Additionally, once the screw head is disposed within the posterior bore, the tapered posterior surface of the element 80

would not act as a stopping surface (anymore than the tapered anterior surface of element 80 stopped the screw head from passing through anteriorly). Furthermore, with the edges of the stopping element 90 locked in place under element 80, the head of the screw could not engage the posterior surface of the element 80. If the stopping member 90 was not locked under the element 80, the tapered posterior surface of the latter would not stop the screw from backing out, so it cannot be considered as a stopping member as contended by the Examiner.

Applicants submit that the Dill reference fails to teach every feature of the rejected claims and as a result fails to support the Examiner's rejection under 35 USC §102(b).

However, to clarify claim 1, applicants have amended the claim to call for the stopping member to have a posterior stopping surface which retains the screw head within the posterior bore portion.

The Examiner contends that the recitation of "An orthopedic implant assembly" in the preamble is not a limitation because the believes that the body of the claim fully and intrinsically sets forth all of the limitations of the claim invention, citing *Pitney Bowes, Inc. v. Hewlett-Packard Co.*¹ and *Rowe v. Dror*². However, the cited cases were distinguished by the Federal Circuit in a more recent case (*Poly-America, L.P. v. GSE Lining Technology, Inc.*³) wherein the court stated

Whether to treat a preamble as a limitation is a determination resolved only on review of the entire patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim.

¹ 182 F. 3d 1298, 1305, 51 USPQ2d 1161,1165 (Fed. Cir. 1999)

² 112 F. 3d 473, 478, 42 USPQ2d 1550,1553 (Fed. Cir. 1997)

³ 383 F. 3d 1303 (Fed. Cir. 2004)

The Court concluded that when the phrase in the preamble is used repeatedly to describe the preferred embodiments and when the inventor considered the preamble language represented an important characteristic of the claim invention, then the preamble does not state a purpose or intended use of the invention, but rather discloses a fundamental characteristic of the claimed invention that is properly construed as a limitation of the claim itself.

In the present application, applicants have used the terms orthopedic attachment or orthopedic implant continuously throughout the specification and clearly describes a fundamental characteristic of the invention, namely an assembly for attachment to one or more bones.

Claims 29, 31, 33-36, 42-47, 60, 102, 106 and 114 were rejected by the Examiner under 35 USC §102(b) as being anticipated by Hodorek (U.S. Pat. No. 5,534,032). The Examiner contends that sealing solid washer 200 is a biased stopping member. While applicants understand that the Examiner must take a broad interpretation of claim language, the broad interpretation must be reasonable and consistent with applicants' specification. From the present specification it is clear that the stopping member does not occlude the bore of the attachment member as does the sealing washer 200 of Hodorek. It is clear that the stopping member of the present invention is configured to allow for the passage of the head or the enlarged integral portion of the securing member to pass into the posterior bore portion and to retain the head or enlarged integral portion within the posterior bore portion. To conclude that element 200 of the '032 patent is a stopping member that reduces the transverse configuration of the bore and would allow such passage into the posterior bore portion is

believed to be an unreasonable interpretation of the claim that is not consistent with the specification. To clarify this feature, Applicants have amended claims 29, 63, 89, 94 and 96 to call for the stopping member to allow the head or enlarged integral portion of the securing member to pass through the stopping member into the posterior bore portion and to have a posterior stopping surface to facilitate retention of the head or enlarged integral portion within the posterior bore portion. The sealing washer 200 of Hodorek fails to meet the requirements of these claims, so the rejection is not supported by this reference.

Claims 29-31, 33-37, 39-40, 42-48, 60, 89-95, 102, 105 and 114 were rejected under 35 U.S.C. 35 USC §102(b) as being anticipated by Hodorek (U.S. Pat. No. 5,534,032). Apparently, the Examiner contends that element 20 is a resilient stopping member as called for in the claims. However, as mentioned above, these claims require that the stopping member allow the head or enlarge integral portion to pass into the posterior bore portion of the attachment or stabilizing member and to have a posterior stopping surface to retain the head or enlarged integral portion within the posterior bore portion. The reference does not teach this feature and therefore does not meet all the requirements of the claims so the reference does not support the Examiner's rejection.

Claims 29, 31, 36, 42-48, 50 and 89-105 were rejected by the Examiner under 35 USC §102(e) as being anticipated by Richelsoph (U.S. Pat. No. 6,017,345).

The above rejected claims call for the stopping member to allow passage of the enlarged head or integral enlarged portion into the posterior bore portion and to have a posterior stopping surface to retain the enlarged head or integral enlarged portion within

the posterior bore portion. The Examiner contends that element 28 of the '345 patent is a stopping member or a resilient member, but the element 28 does not allow the head or enlarged integral portion of the securing member to pass into the posterior bore portion and it does not have a posterior stopping surface to retain the head or enlarged integral portion within the posterior bore portion, so this feature of the rejected claims is not taught by the '345 patent.

Claims 1, 10-17, 29, 31, 33, 36, 42-50, 52-53, 60, 63-79, 89-96, 99-103, 106 and 114 were rejected by the Examiner under 35 USC §102(b) as being anticipated by Estes (U.S. Pat. No. 5,578,034). The Examiner contends that stopping member 16 reduces the transverse configuration of the bore, defines at least in part the posterior bore portion to retain the enlarged integral portion of the securing member and wherein the collar is formed of an elastically deformable or superelastic material.

However, there are substantial deficiencies in the '034 patent. The first is that the securing member is held in the bore by treads and the head or enlarged portion of the securing member is not retained within the posterior bore portion between the biased stopping member and the posterior opening of the stabilizing element. Moreover, the claims call for the stopping member to allow the head or enlarged integral portion of the securing member to pass into the posterior bore portion and to retain the head or enlarged integral portion within the posterior bore portion. The '034 patent fails to teach these features, so the rejection is not supported by this reference.

With respect to claims 69 and 70, the Examiner contends that the enlarged integral portion of the Estes securing member is capable of expanding the collar if it is pushed through the collar. The Examiner further contends that the expression "adapted

to” or “configured to” requires only the ability to so perform and does not constitute a limitation in any patentable sense. However, a key issue is the ability to perform. Fig. 1 clearly shows that the head 20 of the Estes securing member cannot be pushed through the collar or stopping member 16. The tapered top portion 24 of bore 18 of the Estes device prevents the securing member from being pushed through the stopping member 16. Moreover, the stopping member 16 is mounted onto the shaft of the securing member after the securing member is inserted into the attachment or stabilizing member. With the threaded connection between the shaft of the securing member and the stopping member 16, pushing on the securing member will merely push the stopping member 16 out the posterior port in the attachment member. There is no way the device of Estes can be considered as teaching all the features of applicants’ claims.

Response to Claim Rejections Under 35 USC §103

Claim 49 was rejected by the Examiner under 35 USC §103(a) as being unpatentable over Hodorek (‘032) and Richelsoph (‘345). Claim 49 depends indirectly from claim 29 and, as discussed above, neither Hodorek nor Richelsoph teach all the features of claim 29 so these references would not teach all the features of claim 49 which includes the features of claim 29.

Response to Allowable Subject Matter

The applicants note with appreciation the Examiner’s indication that claims 4-8, 18, 20 and 51-58 are directed to patentable subject matter and the allowance of claims 21-28, 59, 84-86, 88 and 107-113.

New Claims 115-119

Applicants have added new claims 115-119 which are directed to the embodiment shown in Figs. 5, 6, 10-12, 14 and 15 and the description found in col. 5, lines 46 -67, col. 6, lines 50-54 and col. 7, lines 19-22. The length of the enlarged integral portion of the securing member is less than the length of the posterior bore portion between the stopping member and the smaller dimension of the posterior bore portion to facilitate movement of the securing member within the posterior bore portion. Moreover, the transverse dimension of the posterior opening is larger than the shaft of the securing member to facilitate angular displacement of the head or enlarged portion of the securing member within the posterior bore portion. The features of these claims are not described in the cited prior art. No new matter is introduced by the addition of these new claims. The chart filed herewith pursuant to 37 C.F.R. §1.173(c) lists the locations in the specifications which support the new claims.

Conclusions

Applicants have included herewith a listing of all claims, including the claims present in the original patent and a Mark-Up Of Amended Claims which indicates the changes made to the claims in the new amended claim pages.

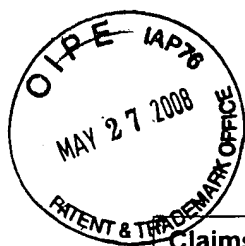
Applicants have also included a chart pursuant to 37 C.F.R. §1.173(c) listing the status and support for the all claims not found in the issued patent and amendments thereto.

Applicants believe that the pending claims define patentable subject matter and warrant an early allowance.

Respectfully submitted:

By: 
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Attorney for Applicants

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**Status And Support For All Claims Not Found In Issued Patent
And Amendments Thereto Pursuant To 37 CFR §1.173(c)**

Claims	Status	Support (Ref. to Issued Patent)
Claim 1	Amended	Col. 4 lines 48-55 (amendment)
Claim 2	Original	
Claim 3	Original	
Claim 4	Original	
Claim 5	Original	
Claim 6	Original	
Claim 7	Original	
Claim 8	Original	
Claim 9	Original	
Claim 10	Original	
Claim 11	Original	
Claim 12	Original	
Claim 13	Original	
Claim 14	Original	
Claim 15	Original	
Claim 16	Original	
Claim 17	Original	
Claim 18	Original	
Claim 19	Original	
Claim 20	Original	
Claim 21	Original	
Claim 22	Original	
Claim 23	Original	
Claim 24	Original	
Claim 25	Original	
Claim 26	Original	
Claim 27	Original	
Claim 28	Original	
Claim 29	Twice Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs13-15
Claim 30	Twice Amended	Figs. 3-5; Col. 4, line 64-col 5, line 30

Claims	Status	Support (Ref. to Issued Patent)
Claim 31	Pending	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled	Cancelled
Claim 33	Pending	Fig. 5; Col.5, lines 59-67
Claim 34	Pending	Figs. 1-6
Claim 35	Pending	Figs. 1-6
Claim 36	Pending	Fig. 3; Col. 1, lines 42-55
Claim 37	Twice Amended	Fig. 4; Col.1, lines 45-47; Col. 5, lines 2-15
Claim 38	Pending	Figs. 3-5; Col.4, lines 31-33
Claim 39	Pending	Figs. 2-5
Claim 40	Pending	Fig. 13
Claim 41	Cancelled	Cancelled
Claim 42	Pending	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Pending	Fig. 1
Claim 44	Pending	Fig. 1; Col. 7, lines 52-57
Claim 45	Pending	Col. 7, lines 47-57
Claim 46	Pending	Col. 7, lines 49-52
Claim 47	Pending	Col. 2, lines 6-8
Claim 48	Pending	Col. 6, lines 1-3
Claim 49	Pending	Col. 6, lines 1-3
Claim 50	Pending	Figs. 2-6
Claim 51	Pending	Figs. 3-5
Claim 52	Twice Amended	Col. 2, lines 19-46
Claim 53	Pending	Col. 2, lines 61-67
Claim 54	Twice Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 55	Pending	Figs 8 and 10. Col. 6, lines 31-50
Claim 56	Pending	Figs. 7-12
Claim 57	Pending	Figs. 7, 8 and 10
Claim 58	Pending	Figs. 8, 10 and 12
Claim 59	Pending	Figs. 7-12; Col. 2, lines 46-60
Claim 60	Pending	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled	Cancelled
Claim 62	Cancelled	Cancelled
Claim 63	Twice Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs13-15; Col. 5, lines 51-59

Claims	Status	Support (Ref. to Issued Patent)
Claim 64	Pending	Col. 5, lines 21-30
Claim 65	Twice Amended	Col. 5, lines 15-20
Claim 66	Pending	Col. 5, lines 2-8
Claim 67	Pending	Col. 5, lines 30-33
Claim 68	Pending	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Pending	Fig. 4; Col. 5, lines 2-8
Claim 70	Twice Amended	Fig. 4; Col. 5, lines 2-8
Claim 71	Pending	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Pending	Fig. 14
Claim 73	Pending	Fig. 14
Claim 74	Pending	Fig. 6; Col 5, lines 46-67
Claim 75	Pending	Fig. 1; Col 7, lines 62-67
Claim 76	Pending	Fig. 1, Col 7, lines 52-57
Claim 77	Pending	Col. 7, lines 52-57
Claim 78	Pending	Col. 7, lines 49-52
Claim 79	Pending	Col. 2, lines 6-8
Claim 80	Cancelled	Cancelled
Claim 81	Cancelled	Cancelled
Claim 82	Cancelled	Cancelled
Claim 83	Cancelled	Cancelled
Claim 84	Pending	Figs13-15; Col. 5, lines 51-59
Claim 85	Pending	Figs13-15; Col. 5, lines 51-59
Claim 86	Pending	Figs13-15; Col. 5, lines 51-59
Claim 87	Cancelled	Cancelled
Claim 88	Pending	Figs. 8, 10 and 12
Claim 89	Twice Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs 7-12; Col. 6, lines 16-54; Col. 7, lines 62-67
Claim 90	Pending	Fig. 3; Col. 1, lines 42-55
Claim 91	Twice Amended	Fig. 3; Col. 1, lines 42-55
Claim 92	Pending	Figs. 3-5; Col.4, lines 31-33
Claim 93	Pending	Col.2, lines 61-67
Claim 94	Twice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 95	Twice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Twice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67

Claims	Status	Support (Ref. to Issued Patent)
Claim 97	Cancelled	Cancelled
Claim 98	Twice Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Pending	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67, Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 100	Pending	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 101	Pending	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 102	Twice Amended	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Cancelled	Cancelled
Claim 104	Twice Amended	Col. 4, lines 31-33; Col. 6, lines 1-3
Claim 105	Pending	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Pending	Figs. 5-6, lines 51-67
Claim 107	New	Figs. 7-12; Col. 6, lines 17-54
Claim 108	New	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	New	Col. 6, lines 1-2; Col. 7, lines 62-67
Claim 110	New	Col. 1, lines 42-67; Col. 7, lines 62-67
Claim 111	New	Figs. 7-12; Col. 6, lines 17-54
Claim 112	New	Figs. 7-12; Col. 6, lines 17-54
Claim 113	New	Figs. 7-12; Col. 6, lines 17-54
Claim 114	New	Fig. 5; Col. 5, lines 46-51
Claim 115	New	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22.
Claim 116	New	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22.
Claim 117	New	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22.
Claim 118	New	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22.
Claim 119	New	Figs. 5, 6, 10-12, 14 and 15; Col. 5, lines 46 -67, Col. 6, lines 50-54 and Col. 7, lines 19-22.



MARK-UP OF AMENDED CLAIMS

1. (Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration and a posterior stopping surface; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained by the posterior stopping surface of the stopping member within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising
 - a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and

at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;

- b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second

opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Twice Amended) An orthopedic attachment assembly, comprising:
- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
 - b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to ~~retain~~ facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion; and
 - c. a stopping member which has a posterior stopping surface, a first configuration within the bore which allows passage of the securing member into the posterior bore portion with the enlarged integral portion of the securing member disposed within the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse

dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the attachment member by the posterior stopping surface of the stopping member ~~[which reduces a transverse configuration of the bore to define at least in part the posterior bore portion and to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member].~~

30. (Twice Amended) The attachment assembly of claim 29 wherein the ~~stopping member has~~

~~[a first]~~ the second configuration of the stopping member ~~[with]~~ has inner transverse dimensions that are smaller than transverse dimensions of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and

~~[a second]~~ the first configuration of the stopping member ~~[with]~~ has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.

37. (Twice Amended) The attachment assembly of claim 36 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension~~[, wherein]~~ by the passage of

~~the enlarged integral portion of the securing member therethrough [has a maximum dimension greater than the first inner dimension of the collar and less than the second inner dimension of the collar].~~

52. (Twice Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive ~~[[a]]~~ the securing member ~~[with an enlarged integral portion]~~, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;

c) ~~[providing a securing member having an elongated body, and an]~~ the enlarged integral portion ~~[which is at or near one end of the elongated~~

~~body and which has~~ of the securing member having a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and

- d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

54. (Twice Amended) An orthopedic implant assembly, comprising:

- a) a securing element with an elongated body and an enlarged head;

- b) an attachment member comprising

an attachment component which has at least one bore configured

to receive ~~[[a]]~~ the securing element ~~[with an enlarged head],~~

the bore having a first bore portion, and a second bore

portion having at least one smaller transverse dimension

than transverse dimensions of the first bore portion;

a stopping surface which reduces a transverse configuration of the

first bore portion to retain the enlarged head of the securing

element within the bore of the attachment member between

the stopping surface and the second bore portion, and

a third bore portion between the stopping surface and the second

bore portion having a surface configured to conform at least

in part to part of the enlarged head of the securing element
received by the bore; and

[[b]]c) the enlarged head of the securing element [~~having an elongated body and an enlarged head at one end of the elongated body which has~~] having a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed at least in part by the stopping surface and [~~which has~~] having an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the first bore portion and the second bore portion, so that the head of the securing element is retained within the bore between the stopping surface and the second bore portion in the attachment component.

63. (Twice Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore [which] allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing member disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the stabilizing element by the posterior stopping surface of the stopping member and ~~which defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration [[:]] [[and]]~~

~~[c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and an enlarged integral portion, the enlarged integral portion having a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained between the stopping member and the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so~~

~~that the securing element is angularly displaceable within the posterior bore portion of the bore].~~

65. (Twice Amended) The assembly of claim 63 wherein the stopping member is biased to the ~~first transverse~~ second configuration.

70. (Twice Amended) The assembly of claim 69 wherein the ~~[head of the securing element has a]~~ curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

89. (Twice Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient radially deflectable member which has a posterior stopping surface, which is configured to engage a surface of the assembly and which has a first configuration that allows the enlarged integral portion of

the securing element to pass into the posterior bore portion and ~~[to retain]~~
a second configuration that retains the enlarged integral portion of the
securing element within the posterior bore portion by the posterior
stopping surface and prevent the back-out of the securing element
through the bore of the stabilizing element.

91. (Twice Amended) The assembly of claim 90 wherein the biased collar
~~has a first configuration and~~ is elastically deformable to ~~[[a]]~~ the second first
configuration.

92. (Amended) The assembly of claim 91 wherein the ~~second~~ first
configuration is an expanded configuration.

94. (Twice Amended) An orthopedic implant assembly which has a
stabilizing element having an anterior surface, a posterior surface, and at least one bore
extending through the stabilizing element from the anterior surface to the posterior
surface with an anterior bore portion, a posterior bore portion having a posterior opening
with a transverse dimension smaller than a transverse dimension of the anterior bore
portion and which has a securing element having an elongated body and an enlarged
integral head with a maximum transverse dimension greater than a transverse
dimension of the posterior opening of the posterior bore portion in the stabilizing
element, characterized by:

a resilient longitudinally deflectable member which is configured to engage a
surface of the assembly, which has a posterior stopping surface, which has a first
configuration that allows the securing element to pass into the posterior bore portion
with the enlarged integral portion of the securing element to be disposed within the

posterior bore portion posterior to the deflectable member ~~[to retain]~~ and a second configuration that retains the enlarged integral head of securing element within the posterior bore portion by the stopping surface and ~~[prevent]~~ prevents the back-out of the securing element through the bore of the stabilizing element.

95. (Twice Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member ~~is configured to deflect~~ deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Twice Amended) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; [and]
 - b. a securing element having an elongated body and an enlarged integral portion; and
 - c. a biased stopping member which has a posterior stopping surface, which is elastically deformable to a first configuration that has a first transverse dimension that allows the securing element to pass into the posterior bore portion with the enlarged integral portion of the securing element disposed posterior to the biased stopping member ~~[extends within the at least one bore of the stabilizing element and reduces at least one transverse~~

~~dimension of the bore and which is elastically deformable to] a second configuration that [increases the at least one] has a second transverse dimension smaller than the first transverse dimension so as to retain the enlarged integral portion of the securing element within the posterior bore portion by the stopping surface [reduced by the biased stopping member in the first configuration; and]~~

~~[c. — a securing element having an elongated body and an enlarged integral portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element within the posterior bore portion].~~

97. (Cancelled)

98. (Twice Amended) The orthopedic implant assembly of claim ~~[[97]]~~ 96 wherein the biased stopping member elastically returns from the ~~[second]~~ first configuration back to the ~~[first]~~ second configuration.

102. (Twice Amended) The attachment assembly of claim 29, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing ~~component~~ member within the posterior bore portion of the attachment member ~~[within the posterior bore portion]~~.

103. (Cancelled)

104. (Twice Amended) The attachment assembly of claim [[103]] 102 wherein the biased stopping member is elastically deformed by the passage of the enlarged integral portion of the securing member.

ing member so as to facilitate angular displacement within the posterior bore portion.

115. (New) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a stopping member which has a posterior stopping surface, a first configuration that allows the enlarged integral portion of the securing member to pass into the posterior bore portion and a second configuration that facilitates retention of the enlarged

integral portion of the securing member within the posterior bore portion by the posterior stopping surface and which defines at least in part a length of the posterior bore portion that is longer than the length of the enlarged integral portion of the securing member to allow displacement of the enlarged integral portion of the securing member within the posterior bore portion.

116. (New) The orthopedic attachment assembly of claim 115 wherein the securing member has a portion posterior to the integral head that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing member within the posterior bore portion.

117. (New) The orthopedic attachment assembly of claim 115 wherein the first configuration of the stopping member has a transverse dimension that is larger than the transverse dimension of the stopping member in the second configuration.

118. (New) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing member has a maximum transverse dimension which is greater than the second transverse dimension of the stopping member.

119. (New) The orthopedic attachment assembly of claim 118 wherein the enlarged integral portion of the securing member has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.



05-28-08

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

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Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Examiner: Anuradha Ramana

Group Art Unit: 3733

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TRANSMITTAL

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Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

- X Amendment And Response To Office Action Mailed 03/19/2008 including;
- X Status And Support For Claim Amendments Pursuant To 37 CFR §1.173(c);
- X Mark-Up Of Amended Claims;
- X Self-stamped return receipt postcard.

2. Claims Fee Calculation

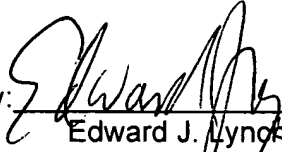
Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	15 - 16 =	0 x	\$210=	\$0.
Total Claims	1205	108 - 106 =	2 x	\$50=	\$100.

Total Claim Fees Due..... \$100.

3. Payment of Fees

X The Commissioner is authorized to charge the fees due and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 50-4358, referencing Atty. Docket No. ACANP-00101. **A duplicate copy of this transmittal is enclosed.**

Respectfully submitted,

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IN THE CLAIMS:

Please cancel claims 97 and 103, amend claims 1, 29, 30, 37, 52, 54, 59, 63, 65, 70, 89, 91, 92, 94, 95, 96, 98, 102 and 104, and add new claims 115-119 as indicated below.

1. (Amended) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration and a posterior stopping surface; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained by the posterior stopping surface of the stopping member within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.
2. (Original) The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargeable from an unexpanded

inner diameter to an expanded inner diameter, wherein the head of the securing element has a maximum diameter greater than the unexpanded inner diameter of the collar and less than the expanded inner diameter of the collar.

3. (Original) The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.

4. (Original) The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.

5. (Original) The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

6. (Original) The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and

circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.

7. (Original) The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

8. (Original) The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.

9. (Original) The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

10. (Original) The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. (Original) The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. (Original) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. (Original) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

14. (Original) The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. (Original) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. (Original) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. (Original) The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. (Original) The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. (Original) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. (Original) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;
- b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and

- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

22. (Original) The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. (Original) An orthopedic implant assembly, comprising

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface; and

- b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element.

24. (Original) The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

25. (Original) The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members; the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. (Original) The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. (Original) The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway having a posterior stopping surface;
- b) providing a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and

- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the posterior stopping surface of the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Twice Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion;
- and

c. a stopping member which has a posterior stopping surface, a first configuration within the bore which allows passage of the securing member into the posterior bore portion with the enlarged integral portion of the securing member disposed within the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the attachment member by the posterior stopping surface of the stopping member.

30. (Twice Amended) The attachment assembly of claim 29 wherein the stopping
the second configuration of the stopping member has inner transverse dimensions that are smaller than transverse dimensions of the enlarged integral portion of the securing member to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion and
the first configuration of the stopping member has inner transverse dimensions that are greater than transverse dimensions of the enlarged integral portion of the securing member to allow passage of the enlarged integral portion of the securing member into the posterior bore portion.
31. (Pending) The attachment assembly of claim 29 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Pending) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Pending) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Pending) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Pending) The attachment assembly of claim 29 wherein the stopping member is a biased stopping member.

37. (Twice Amended) The attachment assembly of claim 36 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension by the passage of the enlarged integral portion of the securing member therethrough.

38. (Pending) The attachment assembly of claim 37 wherein the bore has a groove which receives the collar.

39. (Pending) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Pending) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Pending) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Pending) The attachment assembly of claim 29 wherein the attachment member includes at least two bores.

44. (Pending) The attachment assembly of claim 29 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Pending) The attachment assembly of claim 29 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Pending) The attachment assembly of claim 29 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Pending) The attachment assembly of claim 31 wherein the securing member is selected from the group consisting of screws and nails.

48. (Pending) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Pending) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Pending) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Pending) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Twice Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

a securing member with an elongated body and an enlarged integral portion,

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;

- c) the enlarged integral portion of the securing member having a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

53. (Pending) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Twice Amended) An orthopedic implant assembly, comprising:

a) a securing element with an elongated body and an enlarged head;

b) an attachment member comprising

an attachment component which has at least one bore configured

to receive the securing element, the bore having a first bore

portion, and a second bore portion having at least one

smaller transverse dimension than transverse dimensions of

the first bore portion;

a stopping surface which reduces a transverse configuration of the

first bore portion to retain the enlarged head of the securing

element within the bore of the attachment member between the stopping surface and the second bore portion, and a third bore portion between the stopping surface and the second bore portion having a surface configured to conform at least in part to part of the enlarged head of the securing element received by the bore; and

c) the enlarged head of the securing element having a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed at least in part by the stopping surface and having an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the first bore portion and the second bore portion, so that the head of the securing element is retained within the bore between the stopping surface and the second bore portion in the attachment component.

55. (Pending) The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. (Pending) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the

compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (Pending) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (Pending) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Pending) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing an attachment member comprising

an attachment component which has at least one bore configured to

receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion,

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

b) positioning the attachment member against a surface of the patient's bone;

c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed

configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within the second bore portion in the attachment component; and

d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Pending) The attachment assembly of claim 29, wherein

a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and

b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Twice Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore

portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element which is configured to be slidably disposed within the bore of the stabilizing element and which has an elongated body and an enlarged integral portion; and

c. a stopping member which is at least partially disposed within the bore of the stabilizing element, which has a posterior stopping surface, a first configuration within the bore allowing passage of the securing element into the posterior bore portion with the enlarged integral portion of the securing member disposed in the posterior bore portion posterior to the stopping member and a second configuration within the bore which has smaller transverse dimensions than the first configuration to facilitate retention of the enlarged integral portion of the securing member within the posterior bore portion of the stabilizing element by the posterior stopping surface of the stopping member.

64. (Pending) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Twice Amended) The assembly of claim 63 wherein the stopping member is biased to the second configuration.

66. (Pending) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Pending) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Pending) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Twice Amended) The assembly of claim 69 wherein the curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Pending) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Pending) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Pending) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Pending) The assembly of claim 10 wherein the body of the securing

element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

75. (Pending) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (Pending) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (Pending) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Pending) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Pending) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Pending) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,

b. a stopping member at the anterior portion of the bore; and

c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (Pending) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (Pending) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. (Pending) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Twice Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior

surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient radially deflectable member which has a posterior stopping surface, which is configured to engage a surface of the assembly and which has a first configuration that allows the enlarged integral portion of the securing element to pass into the posterior bore portion and a second configuration that retains the enlarged integral portion of the securing element within the posterior bore portion by the posterior stopping surface and prevent the back-out of the securing element through the bore of the stabilizing element.

90. (Pending) The assembly of claim 89 wherein the radially deflectable member comprises a biased collar.

91. (Twice Amended) The assembly of claim 90 wherein the biased collar is elastically deformable to the first configuration.

92. (Amended) The assembly of claim 91 wherein the ~~second~~ first configuration is an expanded configuration.

93. (Pending) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

94. (Twice Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient longitudinally deflectable member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Twice Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member deflects longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Twice Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a securing element having an elongated body and an enlarged integral portion; and

c. a biased stopping member which has a posterior stopping surface, which is elastically deformable to a first configuration that has a first transverse dimension that allows the securing element to pass into the posterior bore portion with the enlarged integral portion of the securing element disposed posterior to the biased stopping member a second configuration that has a second transverse dimension smaller than the first transverse dimension so as to retain the enlarged integral portion of the securing element within the posterior bore portion by the stopping surface.

97. (Cancelled)

98. (Twice Amended) The orthopedic implant assembly of claim 96 wherein the biased stopping member elastically returns from the first configuration back to the second configuration.

99. (Pending) The assembly of claim 96 wherein the biased stopping member comprises a collar.

100. (Pending) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

101. (Pending) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Twice Amended) The attachment assembly of claim 29, wherein the stopping member is a biased stopping member which reduces a transverse

configuration of the anterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

103. (Cancelled)

104. (Twice Amended) The attachment assembly of claim 102 wherein the biased stopping member is elastically deformed by the passage of the enlarged integral portion of the securing member.

105. (Pending) The attachment assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Pending) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (Pending) An orthopedic implant assembly suitable for attachment to a bone which has a stabilizing element having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion and a posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion, which has a stopping member having a passageway therethrough at an anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior bore portion in the stabilizing element, characterized by:
the enlarged portion of the securing element

being at least in part reversibly compressible from a first configuration with a first transverse dimension to a second configuration with a second smaller transverse dimension that is less than the smallest transverse dimension of the passageway through the stopping member,

the compressible part of the enlarged integral portion of the securing element being biased towards the first configuration,

the enlarged integral portion of the securing element being configured to contact the stopping member so as to compress the compressible part of the enlarged integral portion of the securing element to its compressed configuration as the enlarged integral portion is displaced posteriorly through the stopping member passageway,

whereby the assembly can be attached to the bone with a single motion of advancing the securing element through the stopping member passageway and into the bone.

108. (Pending) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises a biased collar.

109. (Pending) The assembly of claim 108 wherein the biased collar is elastically deformable to the second configuration.

110. (Pending) The assembly of claim 108 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

111. (Pending) The assembly of claim 107 wherein the compressible part of

the enlarged integral portion of the securing element comprises at least one circumferentially disposed member.

112. (Pending) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the securing element.

113. (Pending) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the securing element.

114. (Pending) The orthopedic attachment assembly of claim 29 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing member so that the enlarged integral portion of the securing member is longitudinally displaceable within the posterior bore portion when retained therein.

115. (New) An orthopedic attachment assembly, comprising:

a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension and a shaft extending from the enlarged integral portion configured to be secured within bone;

b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion

having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and

c. a stopping member which has a posterior stopping surface, a first configuration that allows the enlarged integral portion of the securing member to pass into the posterior bore portion and a second configuration that facilitates retention of the enlarged integral portion of the securing member within the posterior bore portion by the posterior stopping surface and which defines at least in part a length of the posterior bore portion that is longer than the length of the enlarged integral portion of the securing member to allow displacement of the enlarged integral portion of the securing member within the posterior bore portion.

116. (New) The orthopedic attachment assembly of claim 115 wherein the securing member has a portion posterior to the integral head that has a transverse dimension smaller than a transverse dimension of an opening in the posterior bore portion to provide angular displacement of the securing member within the posterior bore portion.

117. (New) The orthopedic attachment assembly of claim 115 wherein the first configuration of the stopping member has a transverse dimension that is larger than the transverse dimension of the stopping member is the second configuration.

118. (New) The orthopedic attachment assembly of claim 116 wherein the enlarged integral portion of the securing member has a maximum transverse dimension which is greater than the second transverse dimension of the stopping member.

119. (New) The orthopedic attachment assembly of claim 118 wherein the enlarged integral portion of the securing member has a tapered posterior surface configured to expand the stopping member upon the passage therethrough.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 05/08/2008
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EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

- 3733

MAIL DATE	DELIVERY MODE

05/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Interview Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3733	

All participants (applicant, applicant's representative, PTO personnel):

(1) Edward J. Lynch. (3)_____.

(2) Anu Ramana. (4)_____.

Date of Interview: 06 May 2008.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____.

Claim(s) discussed: 1 and 29.

Identification of prior art discussed: Prior art of record used in the rejection.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative proposed changes to the claims to better define Applicant's invention over the cited prior art. The Examiner agreed to reconsider the rejection of record when the proposed changes are submitted in a formal amendment.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

/Anu Ramana/
Primary Examiner, Art Unit 3733

Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



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10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 03/19/2008
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EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

3733

MAIL DATE	DELIVERY MODE

03/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/620,154	TALABER ET AL.	
	Examiner	Art Unit	
	Anu Ramana	3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31,33-40,42-60,63-79,84-86 and 88-114 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-28,59,84-86,88 and 107-113 is/are allowed.
- 6) ☒ Claim(s) 1-3,9-17,19,29-40,42-50,52-58,60,63-79,89-106 and 114 is/are rejected.
- 7) ☒ Claim(s) 4-8,18,20 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)	5) ☐ Notice of Informal Patent Application
Paper No(s)/Mail Date <u>12/7/06</u> .	6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 52, line 15: recitation of "the securing member" lacks antecedent basis.

In claim 54, line 17: recitation of "the securing element" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 9-11, 16-17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Dill (US 5,118,235).

Dill discloses a stabilizing element 10 having an anterior surface, a posterior surface and at least one bore 56 having a first opening in the anterior surface and a second opening in the posterior surface smaller than the first opening; a biased stopping member 80; a pin or "securing element" 14 having an elongated body 38 with a head 36 integral with the body, the head having a maximum diameter greater than the

smaller diameter configuration of the passageway; and a curved lip or "biased stopping member" 80 that defines a reversibly expandable passageway (Figs. 2 and 7, col. 3, lines 33-68 and col. 4, lines 1-16).

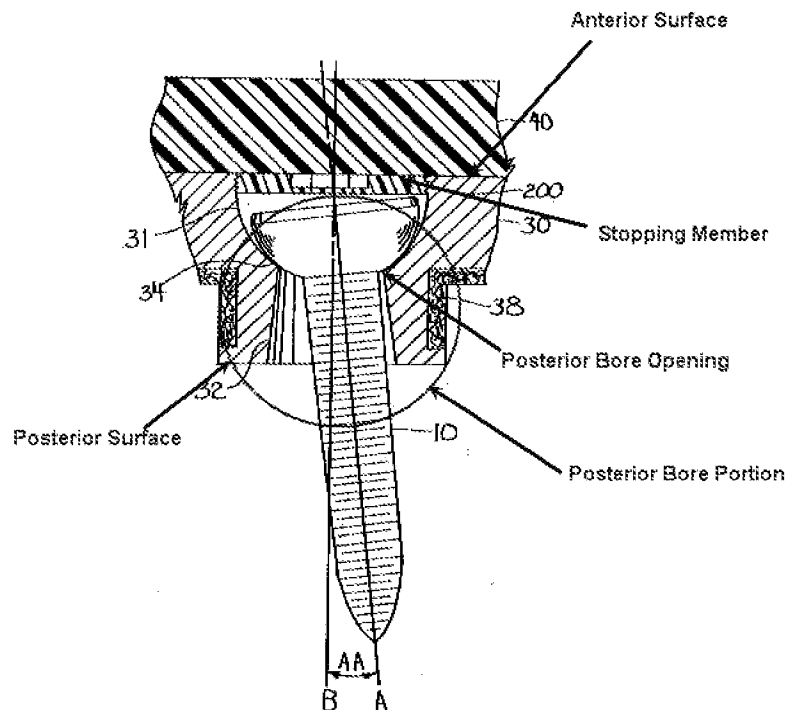
Regarding the recitation, "An orthopedic implant assembly" it is noted that if the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999). See also *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997) ("where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation") (per MPEP 2111.02).

Claims 29, 31, 33-36, 42-47, 60, 102, 106 and 114 are rejected under 35 U.S.C. 102(b) as being anticipated by Hodorek (US 5,534,032).

Hodorek discloses an orthopedic attachment assembly including: an elongated securing member 10 having an enlarged integral portion 11 with a curved posterior surface; an attachment member 30 having an anterior surface, a posterior surface and at least one bore extending from the anterior surface to the posterior surface; a bore having an anterior bore portion and a posterior bore portion with a posterior bore opening having at least one transverse dimension smaller than a transverse dimension of the enlarged integral portion of the securing member; and a stopping member or "biased stopping member" 200 which reduces a transverse configuration of the bore when placed in the bore and defines or demarcates the posterior bore portion from the anterior bore portion (Fig. 7 and col. 5, lines 22-37). It is noted that stopping member is biased in that it has threads that engage threads in member 30.

Regarding claim 45, it is noted that a fixation element such as a plate conforms to the surface of the underlying bone in order to serve its intended purpose and thus would have a curved surface.

Please refer marked up Fig. 7 from Hodorek below.

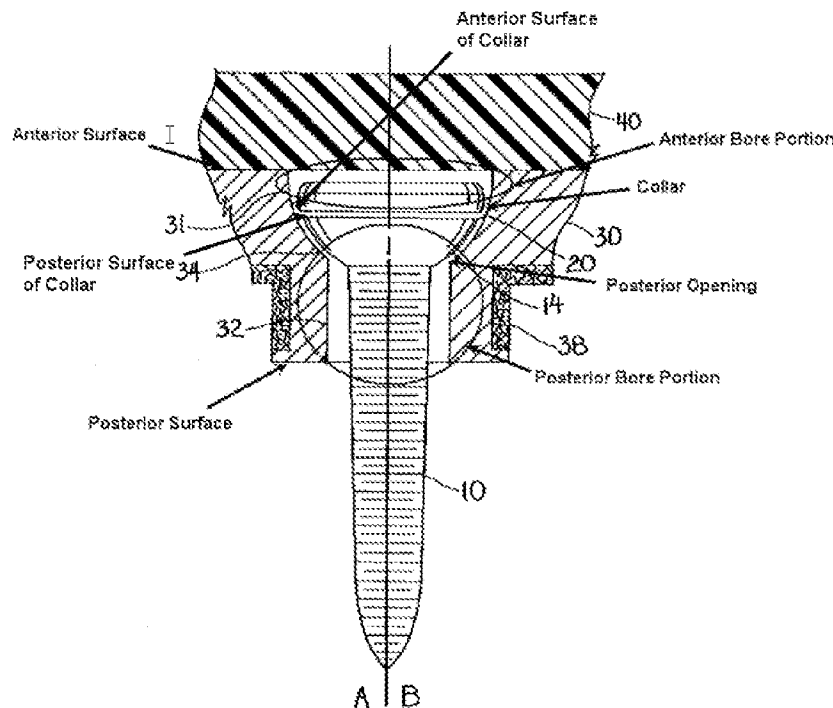


Using an alternate interpretation, claims 29-31, 33-37, 39-40, 42-48, 60, 89-95, 102, 105 and 114 are rejected under 35 U.S.C. 102(b) as being anticipated by Hodorek (US 5,534,032).

Hodorek discloses an orthopedic implant assembly including: a stabilizing element 30 having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface; a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion; a securing element 10 having an enlarged integral portion 11; a radially deflectable or longitudinally deflectable member 20 including a raised portion or collar (Fig. 6 and col. 3, lines 6-40). Please refer marked up Fig. 6 on the following page. Note that member 20 is resilient and is therefore capable of being radially as well as longitudinally deflectable.

Regarding claim 45, it is noted that a fixation element such as a plate conforms to the surface of the underlying bone in order to serve its intended purpose and thus would have a curved surface.

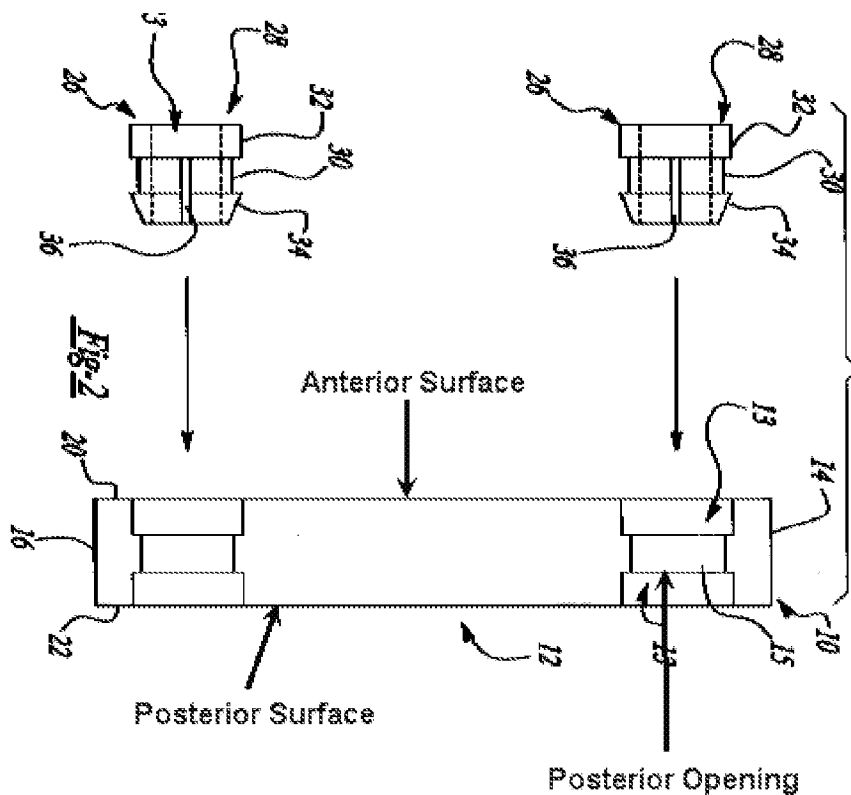
Regarding claim 105, it is noted that member 20 is capable of returning to the first configuration after passage of the enlarged integral portion of the securing member. It is noted that Applicant's are not claiming that the securing member has to pass through the biased stopping member in order for orthopedic implant to be assembled.



Claims 29, 31, 36, 42-48, 50 and 89-105 are rejected under 35 U.S.C. 102(e) as being anticipated by Richelsoph (US 6,017,345).

Richelsoph discloses an orthopedic implant assembly including: a plate or "stabilizing element" 12 having an anterior surface and a posterior surface; a bore extending from the anterior surface to the posterior surface, the bore having an anterior bore portion and a posterior bore portion with a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion (the stepped

bore presents an opening or aperture at each step); an insert or "stopping member" or "resilient member" 28 having a biased collar disposed within the bore, the insert defining a reversible expandable passageway wherein a second transverse or expanded configuration is larger than a transverse dimension of a first or unexpanded or normal biased configuration; and a screw or "securing element" 40 having an enlarged portion 54 is slidably disposed in the bore of the stabilizing element (Figs. 2-17, col. 4, lines 32-67 and col. 5, lines 1-67). See marked up Fig. 2 from Richelsoph below.



Regarding claim 45, a fixation element such as a plate conforms to the surface of the underlying bone in order to serve its intended purpose and thus would have a curved surface.

Regarding claim 89, enlarged integral portion has a maximum transverse dimension defined by head 50, greater than a transverse dimension of the posterior opening of the posterior bore portion.

Regarding claims 94 and 96, insert 28 is longitudinally or radially deflectable upon application of a suitable force by virtue of being compressible.

Regarding claim 105, it is noted that insert 28 is capable of returning to the first configuration after passage of the enlarged integral portion of the securing member. It is noted that Applicant's are not claiming that the securing member has to pass through the biased stopping member in order for orthopedic implant to be assembled.

Claims 1, 10-17, 29, 31, 33, 36, 42-50, 52-53, 60, 63-79, 89-96, 99-103, 106 and 114 are rejected under 35 U.S.C. 102(b) as being anticipated by Estes (US 5,578,034).

Estes discloses an attachment component or stabilizing element 12 including: an elongated securing member 14 having a head with a maximum diameter defined by the enlarged head portion 20 and a smaller diameter portion connecting the enlarged head portion 20 to screw shaft 22; a bore 18, the bore having an anterior bore portion and a posterior bore portion, the posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member; a stopping member 16 which reduces a transverse configuration of the bore, to define at least in part the posterior bore portion to retain the enlarged integral portion of the securing member wherein the collar is formed of an elastically deformable or superelastic material (Fig. 1, col. 4, lines 36-67, col. 5 and col. 6, lines 1-46). See marked up Fig. 1 from Estes on the following page.

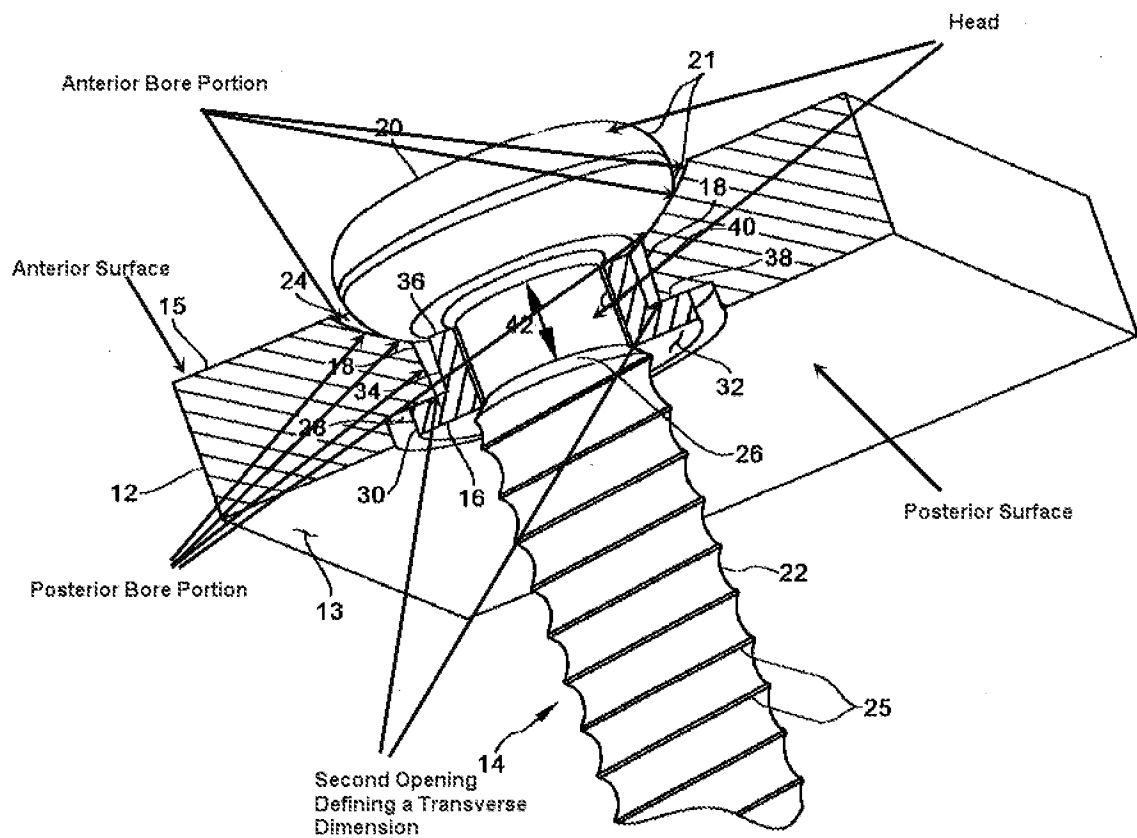
Regarding claims 14, 45 and 77, a fixation element such as a plate conforms to the surface of the underlying bone in order to serve its intended use and thus could have a curved surface.

The method steps of claims 52 and 53 are inherently performed when the Estes assembly is used for internal fixation of bone.

Regarding claims 69 and 70, the Examiner notes that the limitation "configured to expand the collar.....the collar passageway" and "configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway" is met by Estes, because the enlarged integral portion of the securing

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element or member is capable of expanding the collar if it is pushed through the collar. With regard to being "configured to" it has been held that the recitation that an element is adapted or configured to perform a function is not a positive limitation but only requires the ability to so perform and does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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. Patentability shall not be negated by the manner in which the invention was made.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hodorek (US 5,534,032).

Hodorek discloses all elements of the claimed invention except for the stopping member being made of titanium or a superelastic material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed stopping member of titanium or a superelastic material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use, herein enhanced mechanical properties including fatigue endurance, as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richelsoph (US 6,017,345).

Richelsoph discloses all elements of the claimed invention except for the stopping member being made of titanium or a superelastic material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed stopping member of titanium or a superelastic material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use, herein enhanced mechanical properties including fatigue endurance, as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments submitted under "REMARKS" in the response filed on July 3, 2007 have been fully considered.

Applicant's arguments with respect to the rejections of claims 60, 63-67, 73 and 89-95 as being anticipated by Estes (US 5,578,034) are not persuasive for the following reason. The bore of Estes has an anterior bore portion and a posterior bore portion as illustrated in marked up Fig. 1 from Estes on page. It is noted that the Examiner is interpreting the "anterior bore portion" to be a small portion of the bore close to the anterior surface of the plate with the rest of the bore defining the posterior bore portion. Further, the head of the securing member has two portions, an enlarged portion and a smooth portion connecting the enlarged portion to the screw shaft. Contrary to Applicant's arguments, Estes discloses Applicant's claimed invention as discussed in the rejections above and therefore anticipates the claims.

Allowable Subject Matter

The Examiner is withdrawing the allowability of claims 1-3, 9-17 and 19 due to new grounds of rejection made in this action. The Examiner sincerely apologizes for any inconvenience caused to the Applicant by this action.

Claims 52-58 would be allowable if the rejections under 35 U.S.C. 112 second paragraph set forth in this action are overcome.

Claims 4-8, 18, 20 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21-28, 59, 84-86, 88 and 107-113 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-

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4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached at (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR
March 10, 2008

/Anu Ramana/
Primary Examiner, Art Unit 3733

Notice of References Cited	Application/Control No. 10/620,154	Applicant(s)/Patent Under Reexamination TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3733	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,118,235	06-1992	Dill, Michael C.	411/368
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Updated Search.	3/9/2008	A.Ramana

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	03/03/2008		03/09/2008					
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	2	=		✓					
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	31			✓					
	32			-					
	33			✓					
	34			✓					
	35			✓					
	36			✓					

<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
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<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
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CLAIM		DATE																																					
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<i>Index of Claims</i> 	Application/Control No. 10620154	Applicant(s)/Patent Under Reexamination TALABER ET AL.
	Examiner Anu Ramana	Art Unit 3733

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant				☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE							
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	112			=					
	113			=					
	114			✓					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.:

SERIAL NO.:

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

SHEET 1 OF 1

R0372-00101

10/620,154

APPLICANTS:

Talaber et al.

EXAMINER

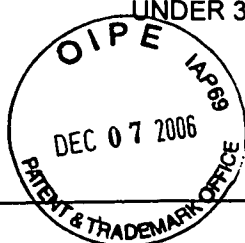
Anuradha Ramana

FILING DATE:

July 15, 2003

GROUP ART UNIT:

3733



U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
/A.R./	A46	591,798	10/1897	Strauss		
	A47	2,017,247	10/1935	Hodge		
	A48	2,376,089	5/45	Savageau		
	A49	2,782,827	2/1957	Rosan		
	A50	3,062,253	11/1962	Millheiser		
	A51	3,561,075	2/1971	Selinko		
	A52	3,896,867	7/1975	Gill et al.		
	A53	4,074,501	2/1978	Sandqvist		
	A54	4,288,902	9/1981	Franz		
	A55	4,380,413	4/1983	Dewey		
	A56	4,640,524	2/1987	Sedlmair		
	A57	4,712,959	12/1987	Hasan		
	A58	4,757,661	7/1988	Hasan		
	A59	5,423,826	6/1995	Coates et al.		
	A60	5,549,612	8/1996	Yapp et al.		
	A61	5,931,838	8/1999	Vito		
	A62	6,258,089	7/2001	Campbell et al.		
	A63	2006/0122602	6/2006	Konieczynski et al.		
	A64	2006/0122603	6/2006	Kolb		
/A.R./	A65	2006/0122604	6/2006	Gorhan et al.		

FOREIGN PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	COUNTRY	TRANSLATION (YES/NO)
/A.R./	B6	WO 00/78238	12/2000	WIPO	
/A.R./	B7	WO 06/055156	5/2006	WIPO	

EXAMINER'S SIGNATURE

/Anuradha Ramana/

DATE CONSIDERED

03/09/2008

† EXAMINER:

Initial if reference is considered, whether or not citation is in conformance with MPEP 609.
 Line through citation if not in conformance and not considered.
 Include copy of this form in next communication to applicant.

* If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120. 37 C.F.R. 1.98(d).

EDWARD J. LYNCH

Patent Attorney

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San Francisco, CA 94111

Telephone: 415.646.8028

Fax: 415.646.8035

E-mail: elynch@m-diplaw.com**RECEIVED
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Company:	Mail Stop Reissue
Fax:	571 273 8300
From:	Ruth Der, Paralegal
Telephone:	415 646 8029
Fax:	415 646.8035
Date:	February 13, 2008
Re:	Serial No. 10/620,154; Atty. Docket No. ACANP-00101
Pages: (including coversheet)	3
Message:	Attached is <i>Status Inquiry</i> and <i>Change Of Correspondence Address</i> .

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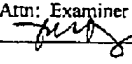
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3733
Issued: July 17, 2001	)	Attorney Docket No.: ACANP-00101
Inventors: Talaber et al.	)	
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT	)	<u>CHANGE OF CORRESPONDENCE</u>
ASSEMBLY	)	<u>ADDRESS</u>
Filed: July 15, 2003	)	

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Anuradha Ramana on February 13, 2008 in San Francisco, CA.

By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

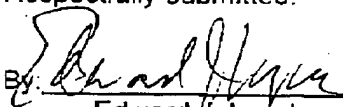
Applicants in the above-identified application request that the Patent Office update their records with the following change of address and to address all future correspondence in this application to the undersigned as follow:

EDWARD J. LYNCH
Patent Attorney
One Embarcadero Center, Suite 562
San Francisco, CA 94111
Telephone: 415.646.8028
Fax: 415.646.8035

Applicants request that the Patent Office change the Attorney Docket No. to read from R0372-00101 to read as the following:

ACANP-00101

Respectfully submitted:


By: Edward J. Lynch
Edward J. Lynch
Reg. No. 24,422
Attorney for Applicants

EDWARD J. LYNCH
Patent Attorney
One Embarcadero Center
Suite 562
San Francisco, CA 94111
Telephone: (415) 646-8028
Facsimile: (415) 646-8035

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: ORTHOPEDIC IMPLANT
ASSEMBLY

Filed: July 15, 2003

Examiner: Anuradha Ramana

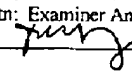
Group Art Unit: 3733

Attorney Docket No.: ACANP-00101

STATUS INQUIRY

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 CFR 1.8

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By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

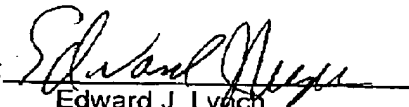
Dear Sirs:

Applicants hereby inquire into the status of the present reissue application.

This reissue application was filed on July 15, 2003. Applicants filed their Response to the notice of non-compliant amendment on July 3, 2007, but have not received a communication from the Patent Office.

Applicants believe that there is no fee due with this communication. However, the Commissioner is authorized to charge the fees due, the deficiency in payment, and/or to credit any overpayment which may be required pursuant to 37 CFR §1.16 and §1.17 to Deposit Acct. No. 50-4358, referencing Atty. Docket No. ACANP-00101.

Respectfully submitted:

By: 

Edward J. Lynch

Reg. No. 24422

Attorney for Applicants

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FACSIMILE TRANSMITTAL SHEET

TO: Examiner Anuradha Ramana

FIRM/COMPANY: Mail Stop REISSUE

FACSIMILE NUMBER: 571 273 8300

**CONFIRMATION
TELEPHONE:**

FROM: Ruth Der, Paralegal

DIRECT DIAL: 415.957-3031

DATE: July 3, 2007

USER NUMBER:

FILE NUMBER: Atty. Docket No. R0372-00101, Reissue Serial No. 10/620,154

TOTAL # OF PAGES: 52
(INCLUDING COVERSHEET)

MESSAGE: Attached is *Supplemental Response To Office Action Mailed 09/08/2006* with attached *Mark-Up Of Amended Claims and Status And Support For All Claims Not Found In Issued Patent And Amendments Thereto Pursuant To 37 CFR §1.173(c)*.

Please confirm receipt of this facsimile.

NOTE: Original will not follow

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

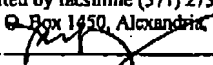
In re Reissue Application for)
 Patent No.: 6,261,291)
 Issued: July 17, 2001)
 Inventors: Talaber et al.)
 Reissue Serial No.: 10/620,154)
 For: ORTHOPEDIC IMPLANT ASSEMBLY)
 Filed: July 15, 2003)

Examiner: Anuradha Ramana
 Group Art Unit: 373
 Atty. Docket No.: R0372-00101

TRANSMITTAL

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-3300 and addressed to Attention: Examiner Anuradha Ramana, Mail Stop REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 3, 2007, in San Francisco, CA.

By: 

Mail Stop Reissue
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

- X Supplemental Response To Office Action Mailed 09/08/2006 including;
- X Mark-Up Of Amended Claims; and
- X Status And Support For All Claims Not Found In Issued Patent And Amendments Thereto Pursuant To 37 CFR §1.173(c).

2. Claims Fee Calculation

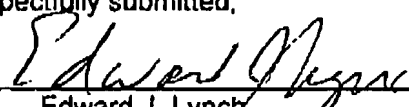
Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	10 - 16 =	0 x	\$200=	\$0.
Total Claims	1205	105 - 106 =	1 x	\$50=	\$0.

Total Claim Fees Due..... \$0.

3. Payment of Fees

- X The Commissioner is authorized to charge the fees due and to credit any overpayment of fees associated with this communication set forth under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101.

Respectfully submitted,

By: 

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 Attorney for Applicants

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: ORTHOPEDIC IMPLANT
ASSEMBLY

Filed: July 15, 2003

Examiner: Anuradha Ramana

Group Art Unit: 3733

Attorney Docket No.: R0372-00101

**SUPPLEMENTAL RESPONSE TO
OFFICE ACTION MAILED 09/08/2006**

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Attention: Examiner Anuradha Ramana, Mail Stop REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 3, 2007 in San Francisco, CA.

By: _____

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In further response to the non-final Office Action mailed on September 8, 2006, and the Office Communication mailed on June 7, 2007, please replace the amended claim pages with the following new claim pages. A marked up copy of the amended claims indicating the changes made thereto is attached.

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IN THE CLAIMS:

Please cancel without prejudice claims 32, 41, 61, 62, 80-83 and 87, amend claims 29-31, 33-40, 42-54, 59-60, 63-74, 77-79, 84, 89-90, 93-97, 102-106 and add new claims 107-114 as indicated below.

1. (Original) An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.

2. (Original) The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargeable from an unexpanded inner diameter to an expanded inner diameter, wherein the head of the securing

element has a maximum diameter greater than the unexpanded inner diameter of the collar and less than the expanded inner diameter of the collar.

3. (Original) The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.

4. (Original) The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.

5. (Original) The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

6. (Original) The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.

7. (Original) The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

8. (Original) The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.

9. (Original) The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

10. (Original) The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. (Original) The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. (Original) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. (Original) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

14. (Original) The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. (Original) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. (Original) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. (Original) The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. (Original) The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. (Original) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. (Original) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and

at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;

- b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping member and the second

opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

22. (Original) The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. (Original) An orthopedic implant assembly, comprising

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway; and
- b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse

passageway between the stopping member and the second opening in the stabilizing element.

24. (Original) The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

25. (Original) The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members; the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. (Original) The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. (Original) The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. (Original) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a

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second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway;

- b) providing a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the

bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

29. (Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a stopping member which reduces a transverse configuration of the bore to define at least in part the posterior bore portion and to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

30. (Amended) The attachment assembly of claim 29 wherein the stopping member has

a first configuration with inner transverse dimensions that are smaller than the enlarged integral portion of the securing member and

a second configuration with inner transverse dimensions that are greater than the enlarged integral portion of the securing member.

31. (Amended) The attachment assembly of claim 29 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Amended) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Amended) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Amended) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Amended) The attachment assembly of claim 29 wherein the stopping member is a biased stopping member.

37. (Amended) The attachment assembly of claim 36 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension, wherein the enlarged integral portion of the securing member has a maximum dimension greater than the first inner dimension of the collar and less than the second inner dimension of the collar.

38. (Amended) The attachment assembly of claim 37 wherein the bore has a groove which receives the collar.

39. (Amended) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Amended) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 29 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 29 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 29 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 29 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Amended) The attachment assembly of claim 31 wherein the securing member is selected from the group consisting of screws and nails.

48. (Amended) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Amended) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive a securing member with an enlarged integral portion, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body and which has a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

53. (Amended) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

- a) an attachment member comprising
- an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion

- having at least one smaller transverse dimension than
transverse dimensions of the first bore portion;
a stopping surface which reduces a transverse configuration of the
first bore portion to retain the enlarged head of the securing
element within the bore of the attachment member between
the stopping surface and the second bore portion, and
a third bore portion between the stopping surface and the second
bore portion having a surface configured to conform at least
in part to part of the enlarged head of the securing element
received by the bore; and
- b) the securing element having an elongated body and an enlarged
head at one end of the elongated body which has a reversibly
compressed configuration with transverse dimensions less than the
reduced transverse configuration of the first bore portion formed by
the stopping surface and which has an uncompressed configuration
with a transverse dimension greater than the reduced transverse
configuration of the first bore portion and the second bore portion,
so that the head of the securing element is retained within the bore
between the stopping surface and the second bore portion in the
attachment component.

55. (Previously presented) The implant assembly of claim 54 wherein the
head of the securing element is configured to be displaceable posteriorly through the
stopping surface from an anterior to a posterior portion thereof.

56. (Previously presented) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (Previously presented) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (Previously presented) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing an attachment member comprising

an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion.

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

- b) positioning the attachment member against a surface of the patient's bone;
 - c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within [the bore between the stopping member and] the second bore portion in the attachment component; and
 - d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.
60. (Amended) The attachment assembly of claim 29, wherein
- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
 - b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

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63. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;

b. a stopping member which is at least partially disposed within the bore of the stabilizing element and which defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and

c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and an enlarged integral portion, the enlarged integral portion having a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained between the stopping member and the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Amended) The assembly of claim 69 wherein the head of the securing element has a curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

75. (Previously presented) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (Previously presented) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (Amended) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Amended) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

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81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,

b. a stopping member at the anterior portion of the bore; and

c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (Previously presented) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (Previously presented) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the

body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. (Previously presented) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient radially deflectable member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

90. (Amended) The assembly of claim 89 wherein the radially deflectable member comprises a biased collar.

91. (Previously presented) The assembly of claim 90 wherein the biased collar has a first configuration and is elastically deformable to a second configuration.

92. (Previously presented) The assembly of claim 91 wherein the second configuration is an expanded configuration.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

94. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient longitudinally deflectable member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and

at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and

b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse dimension of the bore and which is elastically deformable to a second configuration that increases the at least one transverse dimension reduced by the biased stopping member in the first configuration; and

c. a securing element having an elongated body and an enlarged integral portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral portion of the securing element by the stopping member.

98. The orthopedic implant assembly of claim 97 wherein the biased stopping member elastically returns from the second configuration back to the first configuration.

99. (Previously presented) The assembly of claim 96 wherein the biased stopping member comprises a collar.

100. (Amended) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

101. (Previously presented) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Amended) The attachment assembly of claim 29, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing component within the bore of the attachment member within the posterior bore portion.

103. (Amended) The attachment assembly of claim 102 wherein the biased stopping member is elastically deformable from a first configuration to a second configuration which increases the transverse dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The attachment assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of the enlarged integral portion of the securing member.

105. (Amended) The attachment assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Amended) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the

posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (New) An orthopedic implant assembly suitable for attachment to a bone which has a stabilizing element having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion and a posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion, which has a stopping member having a passageway therethrough at an anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior bore portion in the stabilizing element, characterized by:

the enlarged portion of the securing element

being at least in part reversibly compressible from a first configuration with a first transverse dimension to a second configuration with a second smaller transverse dimension that is less than the smallest transverse dimension of the passageway through the stopping member,

the compressible part of the enlarged integral portion of the securing element being biased towards the first configuration,

the enlarged integral portion of the securing element being configured to contact the stopping member so as to compress the compressible part of the enlarged integral portion of the securing element to its compressed configuration as the enlarged integral portion is

displaced posteriorly through the stopping member passageway,

whereby the assembly can be attached to the bone with a single motion of advancing the securing element through the stopping member passageway and into the bone.

108. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises a biased collar.

109. (New) The assembly of claim 108 wherein the biased collar is elastically deformable to the second configuration.

110. (New) The assembly of claim 108 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

111. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises at least one circumferentially disposed member.

112. (New) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the securing element.

113. (New) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the securing element.

114. (New) The orthopedic attachment assembly of claim 29 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing member so that the enlarged integral portion of the

securing member is longitudinally displaceable within the posterior bore portion when retained therein.

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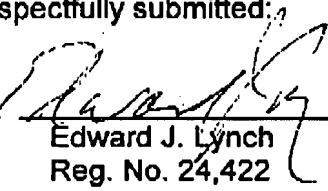
In the Office Communication mailed on June 7, 2007, the Examiner indicated that applicants' supplemental response to the prior Office Action filed on February 7, 2007 was not fully responsive in that claim amendments were not in accordance with 37 C.F.R. §1.173.

In response, applicants have included herewith a listing of all claims, including the claims present in the original patent. Applicants have also included herewith a Mark-Up Of Amended Claims which indicates the changes made to the claims in the new amended claim pages. Note that there were no changes made to the claims that were included with the response filed on December 7, 2006.

Applicants have also included a chart pursuant to 37 C.F.R. §1.173(c) listing the status and support for the all claims not found in the issued patent and amendments thereto.

Applicants believe that the pending claims define patentable subject matter and warrant an early allowance. If the Examiner believes that further discussions may be helpful, please contact the undersigned at the telephone number indicated below.

Respectfully submitted:

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MARK-UP OF AMENDED CLAIMS

29. (Amended) An orthopedic attachment [member] assembly, comprising:
- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
 - b. an attachment [component] member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive [a] the securing member [with an enlarged portion], the bore having [a first] an anterior bore [passageway] portion, [and] a [second] posterior bore [passageway] portion having at least one [smaller] transverse dimension smaller than the transverse [dimensions] dimension of the [first bore passageway] enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
 - [b]c. a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway portion] to define at least in part the posterior bore portion and to retain the enlarged integral portion of [a] the securing [element] member within the posterior bore portion of the attachment member [between the stopping surface and the second bore passageway portion].
 - [c.] [a third bore passageway portion between the stopping surface and the second bore passageway portion having a surface configured

to conform at least in part to part of the enlarged portion of a
securing member received by the bore.)

30. (Amended) The attachment [member] assembly of claim 29 wherein the
stopping [surface] member has

a first configuration with inner transverse dimensions that are smaller than the
enlarged integral portion of [a] the securing member [received by the bore]
and

a second configuration with inner transverse dimensions that are [at least equal
to] greater than the enlarged integral portion of the securing member
[received by the bore].

31. (Amended) The attachment assembly of claim 29 [including a] wherein
the securing member having an enlarged integral [head] portion is slidably disposed
within the bore.

32. (Cancelled)

33. (Amended) The attachment [member] assembly of claim [32] 42 wherein
the posterior surface of the enlarged integral [head] portion of the securing member [has
a posterior surface] is configured at least in part to [engage] conform to the posterior
surface of the [first] posterior bore [passageway] portion to facilitate [the] angulation of
the securing [element] member within the [bore] posterior bore portion.

34. (Amended) The attachment [member] assembly of claim 33 wherein the
[first] posterior surface of the posterior bore [passageway] portion has a [bowl-shaped
surface] bowl shape.

35. (Amended) The attachment [member] assembly of claim 34 wherein the bowl-shaped posterior surface of the [first] posterior bore [passageway] portion at least in part is a hemispherical zone.

36. (Amended) The attachment [member] assembly of claim 29 wherein the stopping [surface] member is [part of] a biased stopping member.

37. (Amended) The attachment [member] assembly of claim 36 wherein the biased stopping member is a collar [defining] having at least in part a passageway enlargeable from [an unexpanded] a first inner [diameter] dimension to [an expanded] a second inner [diameter] dimension [larger than the first inner diameter], wherein [an] the enlarged integral [head] portion of [a] the securing [element] member has a maximum [diameter] dimension greater than the [unexpanded] first inner [diameter] dimension of the collar and less than the [expanded] second inner [diameter] dimension of the collar.

38. (Amended) The attachment [member] assembly of claim 37 wherein the bore has a groove [in the first bore passageway] which receives the collar.

39. (Amended) The attachment [member] assembly of claim 37 wherein the enlarged integral portion of the securing [element] member has a curved posterior surface which is configured to contact an anterior surface of the collar [anterior surface] and expand the collar as the enlarged integral portion of the securing member [head] is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim [36] 39 wherein the anterior surface of the collar [has an anterior surface which] tapers inwardly toward the [transverse] collar passageway [passing therethrough].

41. (Cancelled)

42. (Amended) The attachment [member] assembly of claim 31 wherein a portion of the securing [element] member posterior to the enlarged integral [head] portion has [smaller] transverse dimensions sufficiently smaller than the [second] transverse dimensions of the posterior bore [passageway] portion [in the attachment component] so the securing [element] member may be angularly displaced within the bore.

43. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member includes at least two bores.

44. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment [member] assembly of claim 29 wherein the posterior surface of the attachment [component] member [has a] is at least in part a concave [curved] surface.

46. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is selected from the group consisting of rods and plates.

47. (Amended) The attachment [member] assembly of claim 31 wherein the securing [element] member [disposed within the bore] is selected from the group consisting of screws and nails.

48. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment [member] assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment [component] member.

51. (Amended) The [attachment member] assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member [comprising an attachment component] which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive a securing member with an enlarged integral portion, the bore having [a first] an anterior bore [passageway] portion, and a [second] posterior bore [passageway] portion [having] with at least one [smaller] transverse dimension smaller than transverse dimensions of the [first] anterior bore [passageway] portion, and a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway] to retain the enlarged integral portion of [[a]] the securing [element] member within the posterior bore

portion of the attachment member [between the stopping surface and the second bore passageway];

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing [element] member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body [having] and which has a maximum [diameter] dimension greater than the smaller [diameter] transverse dimension [configuration] of the posterior bore portion [passageway defined by the stopping member and greater than the second bore passageway portion in the attachment component] to retain the enlarged integral portion of the securing [element] member within the [third] posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion in the attachment component];
- d) attaching the securing [element] member to the patient's bone by advancing the securing [element] member within the bore of the attachment [component] member until the enlarged integral portion of the securing [element] member passes the stopping member and is disposed in the [third] posterior bore [passageway] portion.

53. (Amended) The method of claim 52 wherein [after] the [enlarged portion of the] securing [element is positioned in the third bore passageway portion between the stopping surface and the second bore passageway portion and the securing element] member is angularly displaceable within the posterior bore portion so that the securing

[element] member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

a) an attachment member comprising

an attachment component which has at least one bore configured

to receive a securing [member] element with an enlarged

[portion] head, the bore having a first bore [passageway]

portion, and a second bore [passageway] portion having at

least one smaller transverse dimension than transverse

dimensions of the first bore [passageway] portion;

a stopping surface which reduces a transverse configuration of the

first bore [passageway] portion to retain the enlarged

[portion] head of [[a]] the securing element within the bore of

the attachment member between the stopping surface and

the second bore [passageway] portion, and

a third bore portion between the stopping surface and the second

bore [passageway] portion having a surface configured to

conform at least in part to part of the enlarged [portion] head

of [a] the securing [member] element received by the bore;

and

b) [a] the securing element having an elongated body and an enlarged

head at one end of the elongated body which has a reversibly

compressed configuration with transverse dimensions less than the

reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the first bore [passageway] portion and the second [opening] bore portion, so that the head of the securing element is retained within the bore between the stopping [member] surface and the second bore [passageway] portion in the attachment component.

59. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing an attachment member comprising

an attachment component which has at least one bore configured to receive a securing [member] element with an enlarged [portion] head, the bore having a first bore [passageway] portion, and a second bore [passageway] portion having at least one smaller transverse dimension than transverse dimensions of the first bore [passageway] portion,

a stopping surface which reduces a transverse configuration of the first bore [passageway] portion to retain the enlarged [portion] head of a securing element within the bore of the attachment member between the stopping surface and the second bore [passageway] portion;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body and an enlarged head [secured to] at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the [first] second bore [passageway] portion [and the second opening], so that the head of the securing element is retained within [the bore between the stopping member and] the second bore [passageway] portion in the attachment component; and
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged [portion] head of the securing element is in the [passageway defined by the stopping surface] second bore portion.

60. (Amended) [An intracorporeal] The attachment [member] assembly of claim 29, [comprising:] wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
[an attachment component which has at least one bore configured to receive a securing member with an enlarged portion, the bore having a first bore passageway portion, and a second bore

passageway portion with smaller transverse dimensions than transverse dimensions of the first bore passageway portion;

[b.] a stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway portion; and]

[c]b. [a third] the posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion having] has a curved posterior surface configured to conform at least in part to part of [an] the curved posterior surface of the enlarged integral portion of [a] the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore[,] extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion[,] and a posterior bore portion which has a posterior opening with a transverse dimension smaller than [a] the transverse dimension of the anterior bore portion; [and]

b. a stopping member which is at least partially disposed within the bore of the stabilizing element[,] and which [defining] defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse

dimension that is smaller than [[a]] the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and

c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and [a head] an enlarged integral portion, the enlarged integral portion having [which has] a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion [of the bore] in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained between the stopping member and [the smaller transverse dimension in] the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The [Intracorporeal medical device] assembly of claim 63 wherein the stopping [surface] member is configured to prevent the back-out of the [second component] securing element through the bore of the [first component] stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the [head] enlarged

integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim [67] 68 wherein the [head of the securing element has a] curved posterior surface of the enlarged integral portion of the securing element [and which] is configured to [contact the collar anterior surface and] expand the collar as the [head] enlarged integral portion of the securing element is displaced posteriorly through [a] the collar passageway [of the collar].

70. (Amended) The assembly of claim 69 wherein the [head of the securing element has a] curved posterior surface of the enlarged integral portion of the securing element [which] has a minimum transverse dimension smaller than [the] a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact [the] an [collar] anterior surface of the collar and deflect the collar away from a longitudinal axis of the [transverse] collar passageway as the [head] enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim [66] 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein [a] the posterior bore portion [is] has a curved posterior surface that is [and] configured to receive at least in part the curved posterior surface of the [head] the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the [head] enlarged

integral portion of the securing element is configured to be longitudinally displaceable [between a posterior surface of the stopping member and] within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the [transverse dimension of the posterior portion of the bore] second opening of the stabilizing element, and wherein the securing element may be angularly displaced within [the] a posterior portion of the bore of the stabilizing element.

77. (Amended) The assembly of claim 13 wherein the stabilizing element has a [curved] concave posterior surface.

78. (Amended) The assembly of claim [1] 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim [1] 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion, [and]

- b.** a stopping member at the anterior portion of the bore; and
- [b]c.** a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

87. (Cancelled)

89. (Amended) [In an] An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral [head] portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient radially deflectable [stopping] member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the

stabilizing element [and which is slidably disposed within a groove provided within the assembly].

90. (Amended) The assembly of claim 89 wherein the [stopping] radially deflectable member comprises a biased collar.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the [head] enlarged integral portion of the securing element is retained [between anterior and] within the posterior [portions] bore portion [of the bore].

94. (Amended) [In an] An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient longitudinally deflectable [stopping] member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when

the [stopping member] securing element [passes by the engaged surface when advancing] is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and
 - b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse [cross-sectional] dimension of the bore [passageway] and which is elastically deformable to a second configuration [which] that increases the at least one transverse [cross-sectional] dimension reduced by the biased stopping member in the first configuration; and
 - c. a securing element having an elongated body and an enlarged integral [head] portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained [between the biased stopping member and] within the posterior bore portion [of the bore].

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral [head] portion of the securing element by the stopping member.

100. (Amended) The assembly of claim 99 wherein the biased [stopping member] collar is disposed in part within a recess of the stabilizing element.

102. (Amended) [An orthopedic] The attachment [member] assembly of claim 29, [comprising:] wherein

- [a. an attachment component which has at least one bore configured to receive a securing component with an enlarged integral portion, the bore] having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion;]
- [b.] the stopping member is a biased stopping member [surface] which reduces a transverse configuration of the [first] anterior bore [passageway] portion to retain the enlarged integral portion of [a] the securing component within the bore of the attachment [component between the stopping surface and] member within the [second] posterior bore [passageway] portion[; and]
- [c. a third bore passageway portion between the biased stopping member and] the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing component received by the bore].

103. (Amended) The [orthopedic] attachment [member] assembly of claim 102 wherein the biased stopping member is elastically deformable from [the] a first configuration to a second configuration which increases the [at least one] transverse [cross-sectional] dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The [orthopedic] attachment [member] assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of [an] the enlarged integral portion of the securing [component] member.

105. (Amended) The [orthopedic] attachment [member] assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing [component] member.

106. (Amended) The [orthopedic] attachment assembly of claim 31 wherein [the] a posterior surface of the posterior bore [passageway] portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of [a] the securing member so as to facilitate angular displacement within the posterior bore [passageway] portion.

**Status And Support For All Claims Not Found In Issued Patent
And Amendments Thereto Pursuant To 37 CFR §1.173(c)**

Claims	Status	Support (Ref. to Issued Patent)
Claim 29	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line 16; Figs 13-15
Claim 30	Amended	Figs. 3-5; Col. 4, line 64-col 5, line 30
Claim 31	Amended	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled	Cancelled
Claim 33	Amended	Fig. 5; Col.5, lines 59-67
Claim 34	Amended	Figs. 1-6
Claim 35	Amended	Figs. 1-6
Claim 36	Amended	Fig. 3; Col. 1, lines 42-55
Claim 37	Amended	Fig. 4; Col.1, lines 45-47; Col. 5, lines 2-15
Claim 38	Amended	Figs. 3-5; Col.4, lines 31-33
Claim 39	Amended	Figs. 2-5
Claim 40	Amended	Fig. 13
Claim 41	Cancelled	Cancelled
Claim 42	Amended	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Amended	Fig. 1
Claim 44	Amended	Fig. 1; Col. 7, lines 52-57
Claim 45	Amended	Col. 7, lines 47-57
Claim 46	Amended	Col. 7, lines 49-52
Claim 47	Amended	Col. 2, lines 6-8
Claim 48	Amended	Col. 6, lines 1-3
Claim 49	Amended	Col. 6, lines 1-3
Claim 50	Amended	Figs. 2-6
Claim 51	Amended	Figs. 3-5
Claim 52	Amended	Col. 2, lines 19-46
Claim 53	Amended	Col. 2, lines 61-67
Claim 54	Amended	Figs. 7-12; Col. 8, lines 17-54
Claim 55	Previously presented	Figs 8 and 10. Col. 6, lines 31-50
Claim 56	Previously presented	Figs. 7-12
Claim 57	Previously presented	Figs. 7, 8 and 10
Claim 58	Previously presented	Figs. 8, 10 and 12

1 of 3

Serial No. 10/820,154
Atty. Docket No. R0372-00101

DMZ955809.1

Claims	Status	Support (Ref. to Issued Patent)
Claim 59	Amended	Figs. 7-12; Col. 2, lines 46-60
Claim 60	Amended	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled	Cancelled
Claim 62	Cancelled	Cancelled
Claim 63	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs13-15; Col. 5, lines 51-59
Claim 64	Amended	Col. 5, lines 21-30
Claim 65	Amended	Col. 5, lines 15-20
Claim 66	Amended	Col. 5, lines 2-8
Claim 67	Amended	Col. 5, lines 30-33
Claim 68	Amended	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Amended	Fig. 4; Col. 5, lines 2-8
Claim 70	Amended	Fig. 4; Col. 5, lines 2-8
Claim 71	Amended	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Amended	Fig. 14
Claim 73	Amended	Fig. 14
Claim 74	Amended	Fig. 6; Col 5, lines 46-67
Claim 75	Previously presented	Fig. 1; Col 7, lines 62-67
Claim 76	Previously presented	Fig. 1, Col 7, lines 52-57
Claim 77	Amended	Col. 7, lines 52-57
Claim 78	Amended	Col. 7, lines 49-52
Claim 79	Amended	Col. 2, lines 6-8
Claim 80	Cancelled	Cancelled
Claim 81	Cancelled	Cancelled
Claim 82	Cancelled	Cancelled
Claim 83	Cancelled	Cancelled
Claim 84	Amended	Figs13-15; Col. 5, lines 51-59
Claim 85	Previously presented	Figs13-15; Col. 5, lines 51-59
Claim 86	Previously presented	Figs13-15; Col. 5, lines 51-59
Claim 87	Cancelled	Cancelled
Claim 88	Previously presented	Figs. 8, 10 and 12
Claim 89	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs 7-12; Col. 6, lines 16-54; Col. 7, lines 62-67
Claim 90	Amended	Fig. 3; Col. 1, lines 42-55
Claim 91	Previously presented	Fig. 3; Col. 1, lines 42-55

2 of 3

Serial No. 10/620,154
Atty. Docket No. R0372-00101

DM21955809.1

Claims	Status	Support (Ref. to Issued Patent)
Claim 92	Previously presented	Figs. 3-5; Col.4, lines 31-33
Claim 93	Amended	Col.2, lines 61-67
Claim 94	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 95	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 97	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 98	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67, Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 100	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 101	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 102	Amended	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Amended	Fig. 2; Col. 4, lines 14-44
Claim 104	Amended	Col. 4, lines 31-33; Col. 6, lines 1-3
Claim 105	Amended	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Amended	Figs. 5-6, lines 51-67
Claim 107	New	Figs. 7-12; Col. 6, lines 17-54
Claim 108	New	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	New	Col. 6, lines 1-2; Col. 7, lines 62-67
Claim 110	New	Col. 1, lines 42-67; Col. 7, lines 62-67
Claim 111	New	Figs. 7-12; Col. 6, lines 17-54
Claim 112	New	Figs. 7-12; Col. 6, lines 17-54
Claim 113	New	Figs. 7-12; Col. 6, lines 17-54
Claim 114	New	Fig. 5; Col. 5, lines 46-51

3 of 3

Serial No. 10/620,154
 Atty. Docket No. R0372-00101

DM2935809.1

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number

10620154

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	minus 20=	
INDEPENDENT CLAIMS	minus 3 =	
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

12/07/06

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	67	Minus	
Independent	10	Minus	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
BASIC FEE	385.00		BASIC FEE	770.00
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL		OR	TOTAL	

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE	50	OR	TOTAL ADDIT. FEE	

2-7-07

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	67	Minus	67
Independent	10	Minus	10
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE	0	OR	TOTAL ADDIT. FEE	

7/3/07

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	115	Minus	100
Independent	14	Minus	16
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

- * If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
- * If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
- * If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154

07/15/2003

David J. Talaber

R0372-00101

8486

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06/07/2007

EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3733

MAIL DATE

DELIVERY MODE

06/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

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P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO. ^{ED}
10620154	7/15/2003	TALABER ET AL.	R0372-00101

Edward J Lynch
Duane Morris LLP
One Market
Spear Tower Suite 2000
San Francisco, CA 94105

EXAMINER

Anu Ramana

ART UNIT

PAPER

3733

20070601

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The reply filed on February 7, 2007 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s). Claims presented for examination are not in compliance with 37 CFR 1.173. New claims added to the original patent have not been included in the response filed on February 7, 2007. The Examiner requests a complete listing of all claims, including the claims present in the original patent, since some of the new claims depend on the original patent claims. Since the above-mentioned reply appears to be bona fide, applicant is given ONE (1) MONTH or THIRTY (30) DAYS from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

ANURADHA RAMANA
PRIMARY EXAMINER
TECHNOLOGY CENTER 3700

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Docket Number

10620154

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	minus 20=	*
INDEPENDENT CLAIMS	minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

SMALL ENTITY
TYPE ☐

OR OTHER THAN
SMALL ENTITY

RATE	FEE
BASIC FEE	385.00
XS 9=	
X43=	
+145=	
TOTAL	

RATE	FEE
BASIC FEE	770.00
XS18=	
X86=	
+290=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

12/07/06

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	67	Minus	**
Independent	10	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY

OR

OTHER THAN
SMALL ENTITY

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL	50
ADDIT. FEE	

OR

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	

2-7-07

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	67	Minus	** 67
Independent	10	Minus	*** 10
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL	0
ADDIT. FEE	

OR

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus	**
Independent	*	Minus	***
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL	
ADDIT. FEE	

OR

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL	
ADDIT. FEE	

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- *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

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FEB 07 2007

DuaneMorris

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ONE MARKET, SPEAR TOWER, SUITE 2000
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FACSIMILE TRANSMITTAL SHEET

TO: Examiner Anuradha Ramana

FIRM/COMPANY: Mail Stop REISSUE

FACSIMILE NUMBER: 571 273 8300

**CONFIRMATION
TELEPHONE:**

FROM: Ruth Der, Paralegal

DIRECT DIAL: 415.957-3031

DATE: February 7, 2007

USER NUMBER:

FILE NUMBER: Atty. Docket No. R0372-00101, Reissue Serial No. 10/620,154

TOTAL # OF PAGES: 43
(INCLUDING COVERSHEET)

MESSAGE: Attached is *Supplemental Response To Office Action Mailed 09/08/2006.*

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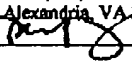
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3731
Issued: July 17, 2001	)	Attorney Docket No.: R0372-00101
Inventors: Talaber et al.	)	
Reissue Serial No.: 10/620,154	)	<u>SUPPLEMENTAL RESPONSE TO</u>
For: ORTHOPEDIC IMPLANT	)	<u>OFFICE ACTION MAILED 09/08/2006</u>
ASSEMBLY	)	
Filed: July 15, 2003	)	

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Attention: Examiner Anuradha Ramana, Mail Stop REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 7, 2007, in San Francisco, CA.

By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In further response to the non-final Office Action mailed on September 8, 2006, and the Office Communication mailed on January 26, 2007, please replace the amended claim pages with the following new claim pages. A marked up copy of the amended claims indicating the changes made thereto is attached.

IN THE CLAIMS:

Please cancel without prejudice claims 32, 41, 61, 62, 80-83 and 87, amend claims 29-31, 33-40, 42-54, 59-60, 63-74, 77-79, 84, 89-90, 93-97, 102-106 and add new claims 107-114 as indicated below.

29. (Amended) An orthopedic attachment assembly, comprising:

- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
- b. an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive the securing member, the bore having an anterior bore portion, a posterior bore portion having at least one transverse dimension smaller than the transverse dimension of the enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- c. a stopping member which reduces a transverse configuration of the bore to define at least in part the posterior bore portion and to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member.

30. (Amended) The attachment assembly of claim 29 wherein the stopping member has

a first configuration with inner transverse dimensions that are smaller than the enlarged integral portion of the securing member and
a second configuration with inner transverse dimensions that are greater than the enlarged integral portion of the securing member.

31. (Amended) The attachment assembly of claim 29 wherein the securing member having an enlarged integral portion is slidably disposed within the bore.

32. (Cancelled)

33. (Amended) The attachment assembly of claim 42 wherein the posterior surface of the enlarged integral portion of the securing member is configured at least in part to conform to the posterior surface of the posterior bore portion to facilitate angulation of the securing member within the posterior bore portion.

34. (Amended) The attachment assembly of claim 33 wherein the posterior surface of the posterior bore portion has a bowl shape.

35. (Amended) The attachment assembly of claim 34 wherein the bowl-shaped posterior surface of the posterior bore portion at least in part is a hemispherical zone.

36. (Amended) The attachment assembly of claim 29 wherein the stopping member is a biased stopping member.

37. (Amended) The attachment assembly of claim 36 wherein the biased stopping member is a collar having at least in part a passageway enlargeable from a first inner dimension to a second inner dimension, wherein the enlarged integral portion of the securing member has a maximum dimension greater than the first inner dimension of the collar and less than the second inner dimension of the collar.

38. (Amended) The attachment assembly of claim 37 wherein the bore has a groove which receives the collar.

39. (Amended) The attachment assembly of claim 37 wherein the enlarged integral portion of the securing member has a curved posterior surface which is configured to contact an anterior surface of the collar and expand the collar as the enlarged integral portion of the securing member is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim 39 wherein the anterior surface of the collar tapers inwardly toward the collar passageway.

41. (Cancelled)

42. (Amended) The attachment assembly of claim 31 wherein a portion of the securing member posterior to the enlarged integral portion has transverse dimensions sufficiently smaller than the transverse dimensions of the posterior bore portion so the securing member may be angularly displaced within the bore.

43. (Amended) The attachment assembly of claim 29 wherein the attachment member includes at least two bores.

44. (Amended) The attachment assembly of claim 29 wherein the attachment member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment assembly of claim 29 wherein the posterior surface of the attachment member is at least in part a concave surface.

46. (Amended) The attachment assembly of claim 29 wherein the attachment member is selected from the group consisting of rods and plates.

47. (Amended) The attachment assembly of claim 31 wherein the securing member is selected from the group consisting of screws and nails.

48. (Amended) The attachment assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment member.

51. (Amended) The assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive a securing member with an enlarged integral portion, the bore having an anterior bore portion, and a posterior bore portion with at least one transverse dimension smaller than transverse dimensions of the anterior bore portion, and

a stopping member which reduces a transverse configuration of the bore to retain the enlarged integral portion of the securing member within the posterior bore portion of the attachment member;

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body and which has a maximum dimension greater than the smaller transverse dimension of the posterior bore portion to retain the enlarged integral portion of the securing member within the posterior bore portion; and
- d) attaching the securing member to the patient's bone by advancing the securing member within the bore of the attachment member until the enlarged integral portion of the securing member passes the stopping member and is disposed in the posterior bore portion.

53. (Amended) The method of claim 52 wherein the securing member is angularly displaceable within the posterior bore portion so that the securing member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

- a) an attachment member comprising
- an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion

- having at least one smaller transverse dimension than
transverse dimensions of the first bore portion;
a stopping surface which reduces a transverse configuration of the
first bore portion to retain the enlarged head of the securing
element within the bore of the attachment member between
the stopping surface and the second bore portion, and
a third bore portion between the stopping surface and the second
bore portion having a surface configured to conform at least
in part to part of the enlarged head of the securing element
received by the bore; and
- b) the securing element having an elongated body and an enlarged
head at one end of the elongated body which has a reversibly
compressed configuration with transverse dimensions less than the
reduced transverse configuration of the first bore portion formed by
the stopping surface and which has an uncompressed configuration
with a transverse dimension greater than the reduced transverse
configuration of the first bore portion and the second bore portion,
so that the head of the securing element is retained within the bore
between the stopping surface and the second bore portion in the
attachment component.

59. (Amended) A method of attaching an orthopedic implant assembly to a
bone of a patient, comprising

- a) providing an attachment member comprising

an attachment component which has at least one bore configured to receive a securing element with an enlarged head, the bore having a first bore portion, and a second bore portion having at least one smaller transverse dimension than transverse dimensions of the first bore portion,

a stopping surface which reduces a transverse configuration of the first bore portion to retain the enlarged head of a securing element within the bore of the attachment member between the stopping surface and the second bore portion;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body and an enlarged head at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore portion formed by the stopping surface and which has an uncompressed configuration with a transverse dimension greater than the reduced transverse configuration of the second bore portion, so that the head of the securing element is retained within [the bore between the stopping member and] the second bore portion in the attachment component; and
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged head of the securing element is in the second bore portion.

60. (Amended) The attachment assembly of claim 29, wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
- b. the posterior bore portion has a curved posterior surface configured to conform at least in part to part of the curved posterior surface of the enlarged integral portion of the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion and a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion;
- b. a stopping member which is at least partially disposed within the bore of the stabilizing element and which defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and
- c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and an enlarged integral portion, the

enlarged integral portion having a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained between the stopping member and the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The assembly of claim 63 wherein the stopping member is configured to prevent the back-out of the securing element through the bore of the stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim 68 wherein the curved posterior surface of the enlarged integral portion of the securing element is configured to expand

the collar as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

70. (Amended) The assembly of claim 69 wherein the head of the securing element has a curved posterior surface of the enlarged integral portion of the securing element has a minimum transverse dimension smaller than a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact an anterior surface of the collar and deflect the collar away from a longitudinal axis of the collar passageway as the enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein the posterior bore portion has a curved posterior surface that is configured to receive at least in part the curved posterior surface of the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the enlarged integral portion of the securing element is configured to be longitudinally displaceable within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the second opening of the stabilizing element, and wherein the securing element may be angularly displaced within a posterior portion of the bore of the stabilizing element.

77. (Amended) The assembly of claim 13 wherein the stabilizing element has a concave posterior surface.

78. (Amended) The assembly of claim 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion,
- b. a stopping member at the anterior portion of the bore; and
- c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

87. (Cancelled)

89. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient radially deflectable member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

90. (Amended) The assembly of claim 89 wherein the radially deflectable member comprises a biased collar.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

94. (Amended) An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion

and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, characterized by:

a resilient longitudinally deflectable member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when the securing element is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and
- b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse dimension of the bore and which is elastically deformable to a second configuration that increases the at least one transverse dimension reduced by the biased stopping member in the first

configuration; and

- c. a securing element having an elongated body and an enlarged integral portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral portion of the securing element by the stopping member.

100. (Amended) The assembly of claim 99 wherein the biased collar is disposed in part within a recess of the stabilizing element.

102. (Amended) The attachment assembly of claim 29, wherein the stopping member is a biased stopping member which reduces a transverse configuration of the anterior bore portion to retain the enlarged integral portion of the securing component within the bore of the attachment member within the posterior bore portion.

103. (Amended) The attachment assembly of claim 102 wherein the biased stopping member is elastically deformable from a first configuration to a second configuration which increases the transverse dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The attachment assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of the enlarged integral portion of the securing member.

105. (Amended) The attachment assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing member.

106. (Amended) The attachment assembly of claim 31 wherein a posterior surface of the posterior bore portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of the securing member so as to facilitate angular displacement within the posterior bore portion.

107. (New) An orthopedic implant assembly suitable for attachment to a bone which has a stabilizing element having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion and a posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion, which has a stopping member having a passageway therethrough at an anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior bore portion in the stabilizing element, characterized by:

the enlarged portion of the securing element

being at least in part reversibly compressible from a first configuration with a first transverse dimension to a second configuration with a second smaller transverse dimension that is less than the smallest

transverse dimension of the passageway through the stopping member.

the compressible part of the enlarged integral portion of the securing element being biased towards the first configuration,

the enlarged integral portion of the securing element being configured to contact the stopping member so as to compress the compressible part of the enlarged integral portion of the securing element to its compressed configuration as the enlarged integral portion is displaced posteriorly through the stopping member passageway,

whereby the assembly can be attached to the bone with a single motion of advancing the securing element through the stopping member passageway and into the bone.

108. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises a biased collar.

109. (New) The assembly of claim 108 wherein the biased collar is elastically deformable to the second configuration.

110. (New) The assembly of claim 108 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

111. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises at least one circumferentially disposed member.

112. (New) The assembly of claim 111 wherein the at least one

circumferentially disposed member has a posterior end secured to the securing element.

113. (New) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the securing element.

114. (New) The orthopedic attachment assembly of claim 29 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing member so that the enlarged integral portion of the securing member is longitudinally displaceable within the posterior bore portion when retained therein.

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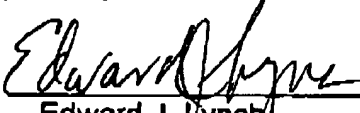
In the Office Communication mailed on January 26, 2007, the Examiner indicated that applicants' response filed on December 7, 2006 was not fully responsive in that claim amendments were not in accordance with 37 C.F.R. 1.173 (b)(1)(2), 37 C.F.R. 1.173(g) and 37 C.F.R. 1.173(c).

In response, applicants have included herewith new amended claim pages which properly amend claims not found in the original patent with proper status identifiers. Applicants have also included herewith a Mark-Up Of Amended Claims which indicates the changes made to the claims in the new amended claim pages. Note that there were no changes made to the claims that were included with the response filed on December 7, 2006.

Applicants have also included a new chart Pursuant to 37 C.F.R. §1.173(c) listing the status and support for the all claims not found in the issued patent and amendments thereto.

Applicants believe that the pending claims define patentable subject matter and warrant an early allowance. If the Examiner believes that further discussions may be helpful, please contact the undersigned at the telephone number indicated below.

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MARK-UP OF AMENDED CLAIMS

29. (Amended) An orthopedic attachment [member] assembly, comprising:
- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
 - b. an attachment [component] member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive [a] the securing member [with an enlarged portion], the bore having [a first] an anterior bore [passageway] portion, [and] a [second] posterior bore [passageway] portion having at least one [smaller] transverse dimension smaller than the transverse [dimensions] dimension of the [first bore passageway] enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
 - [b]c. a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway portion] to define at least in part the posterior bore portion and to retain the enlarged integral portion of [a] the securing [element] member within the posterior bore portion of the attachment member [between the stopping surface and the second bore passageway portion].
 - [c.] [a third bore passageway portion between the stopping surface and the second bore passageway portion having a surface configured

to conform at least in part to part of the enlarged portion of a
securing member received by the bore.]

30. (Amended) The attachment [member] assembly of claim 29 wherein the
stopping [surface] member has

a first configuration with inner transverse dimensions that are smaller than the
enlarged integral portion of [a] the securing member [received by the bore]
and

a second configuration with inner transverse dimensions that are [at least equal
to] greater than the enlarged integral portion of the securing member
[received by the bore].

31. (Amended) The attachment assembly of claim 29 [including a] wherein
the securing member having an enlarged integral [head] portion is slidably disposed
within the bore.

32. (Cancelled)

33. (Amended) The attachment [member] assembly of claim [32] 42 wherein
the posterior surface of the enlarged integral [head] portion of the securing member [has
a posterior surface] is configured at least in part to [engage] conform to the posterior
surface of the [first] posterior bore [passageway] portion to facilitate [the] angulation of
the securing [element] member within the [bore] posterior bore portion.

34. (Amended) The attachment [member] assembly of claim 33 wherein the
[first] posterior surface of the posterior bore [passageway] portion has a [bowl-shaped
surface] bowl shape.

35. (Amended) The attachment [member] assembly of claim 34 wherein the bowl-shaped posterior surface of the [first] posterior bore [passageway] portion at least in part is a hemispherical zone.

36. (Amended) The attachment [member] assembly of claim 29 wherein the stopping [surface] member is [part of] a biased stopping member.

37. (Amended) The attachment [member] assembly of claim 36 wherein the biased stopping member is a collar [defining] having at least in part a passageway enlargeable from [an unexpanded] a first inner [diameter] dimension to [an expanded] a second inner [diameter] dimension [larger than the first inner diameter], wherein [an] the enlarged integral [head] portion of [a] the securing [element] member has a maximum [diameter] dimension greater than the [unexpanded] first inner [diameter] dimension of the collar and less than the [expanded] second inner [diameter] dimension of the collar.

38. (Amended) The attachment [member] assembly of claim 37 wherein the bore has a groove [in the first bore passageway] which receives the collar.

39. (Amended) The attachment [member] assembly of claim 37 wherein the enlarged integral portion of the securing [element] member has a curved posterior surface which is configured to contact an anterior surface of the collar [anterior surface] and expand the collar as the enlarged integral portion of the securing member [head] is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim [36] 39 wherein the anterior surface of the collar [has an anterior surface which] tapers inwardly toward the [transverse] collar passageway [passing therethrough].

41. (Cancelled)

42. (Amended) The attachment [member] assembly of claim 31 wherein a portion of the securing [element] member posterior to the enlarged integral [head] portion has [smaller] transverse dimensions sufficiently smaller than the [second] transverse dimensions of the posterior bore [passageway] portion [in the attachment component] so the securing [element] member may be angularly displaced within the bore.

43. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member includes at least two bores.

44. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment [member] assembly of claim 29 wherein the posterior surface of the attachment [component] member [has a] is at least in part a concave [curved] surface.

46. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is selected from the group consisting of rods and plates.

47. (Amended) The attachment [member] assembly of claim 31 wherein the securing [element] member [disposed within the bore] is selected from the group consisting of screws and nails.

48. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment [member] assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment [component] member.

51. (Amended) The [attachment member] assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member [comprising an attachment component] which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive a securing member with an enlarged integral portion, the bore having [a first] an anterior bore [passageway] portion, and a [second] posterior bore [passageway] portion [having] with at least one [smaller] transverse dimension smaller than transverse dimensions of the [first] anterior bore [passageway] portion, and a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway] to retain the enlarged integral portion of [[a]] the securing [element] member within the posterior bore

portion of the attachment member [between the stopping surface and the second bore passageway];

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing [element] member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body [having] and which has a maximum [diameter] dimension greater than the smaller [diameter] transverse dimension [configuration] of the posterior bore portion [passageway defined by the stopping member and greater than the second bore passageway portion in the attachment component] to retain the enlarged integral portion of the securing [element] member within the [third] posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion in the attachment component];
- d) attaching the securing [element] member to the patient's bone by advancing the securing [element] member within the bore of the attachment [component] member until the enlarged integral portion of the securing [element] member passes the stopping member and is disposed in the [third] posterior bore [passageway] portion.

53. (Amended) The method of claim 52 wherein [after] the [enlarged portion of the] securing [element is positioned in the third bore passageway portion between the stopping surface and the second bore passageway portion and the securing element] member is angularly displaceable within the posterior bore portion so that the securing

[element] member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

a) an attachment member comprising

an attachment component which has at least one bore configured to receive a securing [member] element with an enlarged [portion] head, the bore having a first bore [passageway] portion, and a second bore [passageway] portion having at least one smaller transverse dimension than transverse dimensions of the first bore [passageway] portion;

a stopping surface which reduces a transverse configuration of the first bore [passageway] portion to retain the enlarged [portion] head of [[a]] the securing element within the bore of the attachment member between the stopping surface and the second bore [passageway] portion, and

a third bore portion between the stopping surface and the second bore [passageway] portion having a surface configured to conform at least in part to part of the enlarged [portion] head of [a] the securing [member] element received by the bore;
and

b) [a] the securing element having an elongated body and an enlarged head at one end of the elongated body which has a reversibly compressed configuration with transverse dimensions less than the

reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the first bore [passageway] portion and the second [opening] bore portion, so that the head of the securing element is retained within the bore between the stopping [member] surface and the second bore [passageway] portion in the attachment component.

59. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing an attachment member comprising

an attachment component which has at least one bore configured to receive a securing [member] element with an enlarged [portion] head, the bore having a first bore [passageway] portion, and a second bore [passageway] portion having at least one smaller transverse dimension than transverse dimensions of the first bore [passageway] portion,

a stopping surface which reduces a transverse configuration of the first bore [passageway] portion to retain the enlarged [portion] head of a securing element within the bore of the attachment member between the stopping surface and the second bore [passageway] portion;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body and an enlarged head [secured to] at one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the [first] second bore [passageway] portion [and the second opening], so that the head of the securing element is retained within [the bore between the stopping member and] the second bore [passageway] portion in the attachment component; and
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged [portion] head of the securing element is in the [passageway defined by the stopping surface] second bore portion.

60. (Amended) [An intracorporeal] The attachment [member] assembly of claim 29, [comprising:] wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and
[an attachment component which has at least one bore configured to receive a securing member with an enlarged portion, the bore having a first bore passageway portion, and a second bore

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passageway portion with smaller transverse dimensions than transverse dimensions of the first bore passageway portion;

[b.] a stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway portion; and]

[c]b. [a third] the posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion having] has a curved posterior surface configured to conform at least in part to part of [an] the curved posterior surface of the enlarged integral portion of [a] the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore[,] extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion[,] and a posterior bore portion which has a posterior opening with a transverse dimension smaller than [a] the transverse dimension of the anterior bore portion; [and]

b. a stopping member which is at least partially disposed within the bore of the stabilizing element[,] and which [defining] defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse

dimension that is smaller than ~~[[a]]~~ the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and

c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and [a head] an enlarged integral portion, the enlarged integral portion having [which has] a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion [of the bore] in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained between the stopping member and [the smaller transverse dimension in] the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The [intracorporeal medical device] assembly of claim 63 wherein the stopping [surface] member is configured to prevent the back-out of the [second component] securing element through the bore of the [first component] stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the [head] enlarged

Integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim [67] 68 wherein the [head of the securing element has a] curved posterior surface of the enlarged integral portion of the securing element [and which] is configured to [contact the collar anterior surface and] expand the collar as the [head] enlarged integral portion of the securing element is displaced posteriorly through [a] the collar passageway [of the collar].

70. (Amended) The assembly of claim 69 wherein the [head of the securing element has a] curved posterior surface of the enlarged integral portion of the securing element [which] has a minimum transverse dimension smaller than [the] a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact [the] an [collar] anterior surface of the collar and deflect the collar away from a longitudinal axis of the [transverse] collar passageway as the [head] enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim [66] 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein [a] the posterior bore portion [is] has a curved posterior surface that is [and] configured to receive at least in part the curved posterior surface of the [head] the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the [head] enlarged

integral portion of the securing element is configured to be longitudinally displaceable [between a posterior surface of the stopping member and] within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the [transverse dimension of the posterior portion of the bore] second opening of the stabilizing element, and wherein the securing element may be angularly displaced within [the] a posterior portion of the bore of the stabilizing element.

77. (Amended) The assembly of claim 13 wherein the stabilizing element has a [curved] concave posterior surface.

78. (Amended) The assembly of claim [1] 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim [1] 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion, [and]

- b. a stopping member at the anterior portion of the bore; and
- [b]c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

87. (Cancelled)

89. (Amended) [In an] An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral [head] portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient radially deflectable [stopping] member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the

stabilizing element [and which is slidably disposed within a groove provided within the assembly].

90. (Amended) The assembly of claim 89 wherein the [stopping] radially deflectable member comprises a biased collar.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the [head] enlarged integral portion of the securing element is retained [between anterior and] within the posterior [portions] bore portion [of the bore].

94. (Amended) [In an] An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient longitudinally deflectable [stopping] member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when

the [stopping member] securing element [passes by the engaged surface when advancing] is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and
 - b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse [cross-sectional] dimension of the bore [passageway] and which is elastically deformable to a second configuration [which] that increases the at least one transverse [cross-sectional] dimension reduced by the biased stopping member in the first configuration; and
 - c. a securing element having an elongated body and an enlarged integral [head] portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained [between the biased stopping member and] within the posterior bore portion [of the bore].

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral [head] portion of the securing element by the stopping member.

100. (Amended) The assembly of claim 99 wherein the biased [stopping member] collar is disposed in part within a recess of the stabilizing element.

102. (Amended) [An orthopedic] The attachment [member] assembly of claim 29, [comprising:] wherein

- [a. an attachment component which has at least one bore configured to receive a securing component with an enlarged integral portion, the bore] having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion;]
- [b.] the stopping member is a biased stopping member [surface] which reduces a transverse configuration of the [first] anterior bore [passageway] portion to retain the enlarged integral portion of [a] the securing component within the bore of the attachment [component between the stopping surface and] member within the [second] posterior bore [passageway] portion[; and]
- [c. a third bore passageway portion between the biased stopping member and] the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing component received by the bore].

103. (Amended) The [orthopedic] attachment [member] assembly of claim 102 wherein the biased stopping member is elastically deformable from [the] a first configuration to a second configuration which increases the [at least one] transverse [cross-sectional] dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The [orthopedic] attachment [member] assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of [an] the enlarged integral portion of the securing [component] member.

105. (Amended) The [orthopedic] attachment [member] assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing [component] member.

106. (Amended) The [orthopedic] attachment assembly of claim 31 wherein [the] a posterior surface of the posterior bore [passageway] portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of [a] the securing member so as to facilitate angular displacement within the posterior bore [passageway] portion.

**Status And Support For All Claims Not Found In Issued Patent
And Amendments Thereto Pursuant To 37 CFR §1.173(c)**

Claims	Status	Support (Ref. to Issued Patent)
Claim 29	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line 16; Figs 13-15
Claim 30	Amended	Figs. 3-5; Col. 4, line 64-col 5, line 30
Claim 31	Amended	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled	Cancelled
Claim 33	Amended	Fig. 5; Col.5, lines 59-67
Claim 34	Amended	Figs. 1-6
Claim 35	Amended	Figs. 1-6
Claim 36	Amended	Fig. 3; Col. 1, lines 42-55
Claim 37	Amended	Fig. 4; Col.1, lines 45-47; Col. 5, lines 2-15
Claim 38	Amended	Figs. 3-5; Col.4, lines 31-33
Claim 39	Amended	Figs. 2-5
Claim 40	Amended	Fig. 13
Claim 41	Cancelled	Cancelled
Claim 42	Amended	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Amended	Fig. 1
Claim 44	Amended	Fig. 1; Col. 7, lines 52-57
Claim 45	Amended	Col. 7, lines 47-57
Claim 46	Amended	Col. 7, lines 49-52
Claim 47	Amended	Col. 2, lines 6-8
Claim 48	Amended	Col. 6, lines 1-3
Claim 49	Amended	Col. 6, lines 1-3
Claim 50	Amended	Figs. 2-6
Claim 51	Amended	Figs. 3-5
Claim 52	Amended	Col. 2, lines 19-46
Claim 53	Amended	Col. 2, lines 61-67
Claim 54	Amended	Figs. 7-12; Col. 6, lines 17-54
Claim 55	Previously presented	Figs 8 and 10. Col. 6, lines 31-50
Claim 56	Previously presented	Figs. 7-12
Claim 57	Previously presented	Figs. 7, 8 and 10
Claim 58	Previously presented	Figs. 8, 10 and 12

1 of 3

Serial No. 10/620,154
Atty. Docket No. R0372-00101

DMZ955809.1

Claims	Status	Support (Ref. to Issued Patent)
Claim 59	Amended	Figs. 7-12; Col. 2, lines 48-60
Claim 60	Amended	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled	Cancelled
Claim 62	Cancelled	Cancelled
Claim 63	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs13-15; Col. 5, lines 51-59
Claim 64	Amended	Col. 5, lines 21-30
Claim 65	Amended	Col. 5, lines 15-20
Claim 66	Amended	Col. 5, lines 2-8
Claim 67	Amended	Col. 5, lines 30-33
Claim 68	Amended	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Amended	Fig. 4; Col. 5, lines 2-8
Claim 70	Amended	Fig. 4; Col. 5, lines 2-8
Claim 71	Amended	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Amended	Fig. 14
Claim 73	Amended	Fig. 14
Claim 74	Amended	Fig. 6; Col 5, lines 46-67
Claim 75	Previously presented	Fig. 1; Col 7, lines 62-67
Claim 76	Previously presented	Fig. 1, Col 7, lines 52-57
Claim 77	Amended	Col. 7, lines 52-57
Claim 78	Amended	Col. 7, lines 49-52
Claim 79	Amended	Col. 2, lines 6-8
Claim 80	Cancelled	Cancelled
Claim 81	Cancelled	Cancelled
Claim 82	Cancelled	Cancelled
Claim 83	Cancelled	Cancelled
Claim 84	Amended	Figs13-15; Col. 5, lines 51-59
Claim 85	Previously presented	Figs13-15; Col. 5, lines 51-59
Claim 86	Previously presented	Figs13-15; Col. 5, lines 51-59
Claim 87	Cancelled	Cancelled
Claim 88	Previously presented	Figs. 8, 10 and 12
Claim 89	Amended	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs 7-12; Col. 6, lines 16-54; Col. 7, lines 62-67
Claim 90	Amended	Fig. 3; Col. 1, lines 42-55
Claim 91	Previously presented	Fig. 3; Col. 1, lines 42-55

2 of 3

Serial No. 10/620,154
 Atty. Docket No. R0372-00101

DM2055809.1

Claims	Status	Support (Ref. to Issued Patent)
Claim 92	Previously presented	Figs. 3-5; Col.4, lines 31-33
Claim 93	Amended	Col.2, lines 61-67
Claim 94	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 95	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 97	Amended	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 98	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 100	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 101	Previously presented	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line 16
Claim 102	Amended	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Amended	Fig. 2; Col. 4, lines 14-44
Claim 104	Amended	Col. 4, lines 31-33; Col. 6, lines 1-3
Claim 105	Amended	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Amended	Figs. 5-6, lines 51-67
Claim 107	New	Figs. 7-12; Col. 6, lines 17-54
Claim 108	New	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	New	Col. 6, lines 1-2; Col. 7, lines 62-67
Claim 110	New	Col. 1, lines 42-67; Col. 7, lines 62-67
Claim 111	New	Figs. 7-12; Col. 6, lines 17-54
Claim 112	New	Figs. 7-12; Col. 6, lines 17-54
Claim 113	New	Figs. 7-12; Col. 6, lines 17-54
Claim 114	New	Fig. 5; Col. 5, lines 46-51

FEB 07 2007

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: ORTHOPEDIC IMPLANT ASSEMBLY

Filed: July 15, 2003

Examiner: Anuradha Ramana

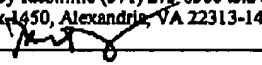
Group Art Unit: 3731

Atty. Docket No.: R0372-00101

TRANSMITTAL

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Attention: Examiner Anuradha Ramana, Mail Stop REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 7, 2007, in San Francisco, CA.

By: Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

- X Supplemental Response To Office Action Mailed 09/08/2006 including:
- X Mark-Up Of Amended Claims; and
- X Status And Support For All Claims Not Found In Issued Patent And Amendments Thereto Pursuant To 37 CFR §1.173(c).

2. Claims Fee Calculation

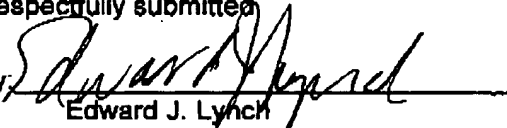
Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	10 - 16 =	0 x	\$200=	\$0.
Total Claims	1205	105 - 106 =	1 x	\$50=	\$0.

Total Claim Fees Due..... \$0.

3. Payment of Fees

- X The Commissioner is authorized to charge the fees and to credit any overpayment of fees associated with this communication set forth under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this transmittal is enclosed for this purpose.

Respectfully submitted

By: 

Edward J. Lynch

Registration No. 24,422

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FEB 07 2007

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

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For: ORTHOPEDIC IMPLANT ASSEMBLY

Filed: July 15, 2003

Examiner: Anuradha Ramana

Group Art Unit: 3731

Atty. Docket No.: R0372-00101

TRANSMITTAL

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By: 

Mail Stop Reissue

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

X Supplemental Response To Office Action Mailed 09/08/2006 including:X Mark-Up Of Amended Claims); andX Status And Support For All Claims Not Found In Issued Patent And Amendments Thereto Pursuant To 37 CFR §1.173(c).

2. Claims Fee Calculation

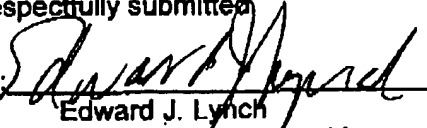
Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	10 - 16 =	0 x	\$200=	\$0.
Total Claims	1205	105 - 106 =	1 x	\$50=	\$0.

Total Claim Fees Due..... \$0.

3. Payment of Fees

X The Commissioner is authorized to charge the fees and to credit any overpayment of fees associated with this communication set forth under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this transmittal is enclosed for this purpose.

Respectfully submitted

By: 

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Registration No. 24,422

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m/

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486
7590 Edward J Lynch Duane Morris LLP One Market Spear Tower Suite 2000 San Francisco, CA 94105		01/26/2007	EXAMINER RAMANA, ANURADHA	
			ART UNIT 3733	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
30 DAYS		01/26/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



UNITED STATES DEPARTMENT OF COMMERCE

U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

10/620,154

07/15/2003

DAVID J. TALABER

R0372-00101

EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER

3733

20070124

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The reply filed on December 7, 2006 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s). The claim amendments are not in accordance with 37 CFR 1.173 (b)(1)(2), 37 CFR 1.173(g) and 37 CFR 1.173(c). It is noted that proper status identifiers must be used in accordance with 37 CFR 1.173 (c). Further, claims not found in the patent but previously presented in the reissue application must be amended by presenting the amended claims by completely underlining the claim. All changes in the reissue are made relative to the original patent. Applicant must point out what is being changed in the "Remarks" portion of the amendment. Since the above-mentioned reply appears to be bona fide, applicant is given ONE (1) MONTH or THIRTY (30) DAYS from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

Anuradha Ramana
1/24/07

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Docket Number

10626154

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	minus 20=	*
INDEPENDENT CLAIMS	minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	385.00
XS 9=	
X43=	
+145=	
TOTAL	

RATE	FEE
BASIC FEE	770.00
XS18=	
X86=	
+290=	
TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

12/07/06

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	* 67	Minus **	=
Independent	* 10	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	50

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	Minus **	=
Independent	*	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
	)	
Patent No.: 6,261,291	)	Group Art Unit: 3731
	)	
Issued: July 17, 2001	)	Attorney Docket No.: R0372-00101
	)	
Inventors: Talaber et al.	)	
	)	
Reissue Serial No.: 10/620,154	)	<u>AMENDMENT AND RESPONSE TO</u>
	)	<u>OFFICE ACTION</u>
For: ORTHOPEDIC IMPLANT	)	<u>MAILED 09/08/2006</u>
ASSEMBLY	)	
	)	
Filed: July 15, 2003	)	

Express Mail Label No.: EQ 810561846 US
Mailed on: December 7, 2006

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In response to the non-final Office Action mailed on September 8, 2006, please
amend the above identified reissue application as follows:

12/11/2006 EAREGAY1 00000098 041679 10620154
01 FC:1205 50.00 DA

IN THE CLAIMS:

Please cancel without prejudice claims 32, 41, 61, 62, 80-83 and 87, amend claims 29-31, 33-40, 42-54, 59-60, 63-74, 78-79, 84, 89-90, 93-97, 102-106 and add new claims 107-114 as indicated below.

29. (Amended) An orthopedic attachment [member] assembly, comprising:
- a. an elongated securing member having an enlarged integral portion with a length, a posterior surface and a transverse dimension;
 - b. an attachment [component] member which has an anterior surface and a posterior surface and which has at least one bore extending through the attachment member from the anterior surface to the posterior surface and is configured to receive [a] the securing member [with an enlarged portion], the bore having [a first] an anterior bore [passageway] portion, [and] a [second] posterior bore [passageway] portion having at least one [smaller] transverse dimension smaller than the transverse [dimensions] dimension of the [first bore passageway] enlarged integral portion of the securing member to retain the enlarged integral portion of the securing member within the posterior bore portion; and
 - [b]c. a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway portion] to define at least in part the posterior bore portion and to retain the enlarged integral portion of [a] the securing [element] member within the

posterior bore portion of the attachment member [between the stopping surface and the second bore passageway portion].

[c.] [a third bore passageway portion between the stopping surface and the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing member received by the bore.]

30. (Amended) The attachment [member] assembly of claim 29 wherein the stopping [surface] member has

a first configuration with inner transverse dimensions that are smaller than the enlarged integral portion of [a] the securing member [received by the bore] and

a second configuration with inner transverse dimensions that are [at least equal to] greater than the enlarged integral portion of the securing member [received by the bore].

31. (Amended) The attachment assembly of claim 29 [including a] wherein the securing member having an enlarged integral [head] portion is slidably disposed within the bore.

32. (Cancelled)

33. (Amended) The attachment [member] assembly of claim [32] 42 wherein the posterior surface of the enlarged integral [head] portion of the securing member [has a posterior surface] is configured at least in part to [engage] conform to the posterior surface of the [first] posterior bore [passageway] portion to facilitate [the] angulation of the securing [element] member within the [bore] posterior bore portion.

34. (Amended) The attachment [member] assembly of claim 33 wherein the [first] posterior surface of the posterior bore [passageway] portion has a [bowl-shaped surface] bowl shape.

35. (Amended) The attachment [member] assembly of claim 34 wherein the bowl-shaped posterior surface of the [first] posterior bore [passageway] portion at least in part is a hemispherical zone.

36. (Amended) The attachment [member] assembly of claim 29 wherein the stopping [surface] member is [part of] a biased stopping member.

37. (Amended) The attachment [member] assembly of claim 36 wherein the biased stopping member is a collar [defining] having at least in part a passageway enlargeable from [an unexpanded] a first inner [diameter] dimension to [an expanded] a second inner [diameter] dimension [larger than the first inner diameter], wherein [an] the enlarged integral [head] portion of [a] the securing [element] member has a maximum [diameter] dimension greater than the [unexpanded] first inner [diameter] dimension of the collar and less than the [expanded] second inner [diameter] dimension of the collar.

38. (Amended) The attachment [member] assembly of claim 37 wherein the bore has a groove [in the first bore passageway] which receives the collar.

39. (Amended) The attachment [member] assembly of claim 37 wherein the enlarged integral portion of the securing [element] member has a curved posterior surface which is configured to contact an anterior surface of the collar [anterior surface] and expand the collar as the enlarged integral portion of the securing member [head] is displaced posteriorly through the collar passageway.

40. (Amended) The attachment assembly of claim [36] 39 wherein the anterior surface of the collar [has an anterior surface which] tapers inwardly toward the [transverse] collar passageway [passing therethrough].

41. (Cancelled)

42. (Amended) The attachment [member] assembly of claim 31 wherein a portion of the securing [element] member posterior to the enlarged integral [head] portion has [smaller] transverse dimensions sufficiently smaller than the [second] transverse dimensions of the posterior bore [passageway] portion [in the attachment component] so the securing [element] member may be angularly displaced within the bore.

43. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member includes at least two bores.

44. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is configured to conform to and extend between at least two bone segments.

45. (Amended) The attachment [member] assembly of claim 29 wherein the posterior surface of the attachment [component] member [has a] is at least in part a concave [curved] surface.

46. (Amended) The attachment [member] assembly of claim 29 wherein the attachment [component] member is selected from the group consisting of rods and plates.

47. (Amended) The attachment [member] assembly of claim 31 wherein the securing [element] member [disposed within the bore] is selected from the group consisting of screws and nails.

48. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of an elastically deformable material.

49. (Amended) The attachment [member] assembly of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (Amended) The attachment [member] assembly of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment [component] member.

51. (Amended) The [attachment member] assembly of claim 4 wherein the collar has a height less than the height of the groove.

52. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

a) providing

an attachment member [comprising an attachment component] which has
an anterior surface and a posterior surface and which has at least
one bore extending through the attachment member from the
anterior surface to the posterior surface and is configured to receive
a securing member with an enlarged integral portion, the bore
having [a first] an anterior bore [passageway] portion, and a
[second] posterior bore [passageway] portion [having] with at least

one [smaller] transverse dimension smaller than transverse dimensions of the [first] anterior bore [passageway] portion, and a stopping member [surface] which reduces a transverse configuration of the [first] bore [passageway] to retain the enlarged integral portion of [[a]] the securing [element] member within the posterior bore portion of the attachment member [between the stopping surface and the second bore passageway];

- b) positioning the attachment member with at least part of the posterior surface thereof against a surface of the patient's bone;
- c) providing a securing [element] member having an elongated body, and an enlarged integral portion which is at or near one end of the elongated body [having] and which has a maximum [diameter] dimension greater than the smaller [diameter] transverse dimension [configuration] of the posterior bore portion [passageway defined by the stopping member and greater than the second bore passageway portion in the attachment component] to retain the enlarged integral portion of the securing [element] member within the [third] posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion in the attachment component];
- d) attaching the securing [element] member to the patient's bone by advancing the securing [element] member within the bore of the attachment [component] member until the enlarged integral portion of the

securing [element] member passes the stopping member and is disposed
in the [third] posterior bore [passageway] portion.

53. (Amended) The method of claim 52 wherein [after] the [enlarged portion of the] securing [element is positioned in the third bore passageway portion between the stopping surface and the second bore passageway portion and the securing element] member is angularly displaceable within the posterior bore portion so that the securing [element] member may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (Amended) An orthopedic implant assembly, comprising

- a) an attachment member comprising
an attachment component which has at least one bore configured
to receive a securing [member] element with an enlarged
[portion] head, the bore having a first bore [passageway]
portion, and a second bore [passageway] portion having at
least one smaller transverse dimension than transverse
dimensions of the first bore [passageway] portion;
a stopping surface which reduces a transverse configuration of the
first bore [passageway] portion to retain the enlarged
[portion] head of [[a]] the securing element within the bore of
the attachment member between the stopping surface and
the second bore [passageway] portion, and
a third bore portion between the stopping surface and the second
bore [passageway] portion having a surface configured to

conform at least in part to part of the enlarged [portion] head
of [a] the securing [member] element received by the bore;
and

- b) [a] the securing element having an elongated body and an enlarged head at one end of the elongated body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the first bore [passageway] portion and the second [opening] bore portion, so that the head of the securing element is retained within the bore between the stopping [member] surface and the second bore [passageway] portion in the attachment component.

55. The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (Amended) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
an attachment component which has at least one bore configured to
receive a securing [member] element with an enlarged [portion]
head, the bore having a first bore [passageway] portion, and a
second bore [passageway] portion having at least one smaller
transverse dimension than transverse dimensions of the first bore
[passageway] portion,
a stopping surface which reduces a transverse configuration of the first
bore [passageway] portion to retain the enlarged [portion] head of a
securing element within the bore of the attachment member
between the stopping surface and the second bore [passageway]
portion;
- b) positioning the attachment member against a surface of the patient's
bone;
- c) providing a securing element having an elongated body and an enlarged
head [secured to] at one end of the body which has a reversibly
compressed configuration with transverse dimensions less than the

reduced transverse configuration of the first bore [passageway] portion formed by the stopping surface and which has an uncompressed configuration with a [diameter] transverse dimension greater than the reduced transverse configuration of the [first] second bore [passageway] portion [and the second opening], so that the head of the securing element is retained within [the bore between the stopping member and] the second bore [passageway] portion in the attachment component; and

- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged [portion] head of the securing element is in the [passageway defined by the stopping surface] second bore portion.

60. (Amended) [An intracorporeal] The attachment [member] assembly of claim 29, [comprising:] wherein

- a. the enlarged integral portion of the elongated securing member has a curved posterior surface; and

[an attachment component which has at least one bore configured to receive a securing member with an enlarged portion, the bore having a first bore passageway portion, and a second bore passageway portion with smaller transverse dimensions than transverse dimensions of the first bore passageway portion;

- [b.] a stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged portion of a securing element within the bore of the attachment member

between the stopping surface and the second bore passageway portion; and]

[c]b. [a third] the posterior bore [passageway] portion [between the stopping surface and the second bore passageway portion having] has a curved posterior surface configured to conform at least in part to part of [an] the curved posterior surface of the enlarged integral portion of [a] the securing member received by the bore.

61. (Cancelled)

62. (Cancelled)

63. (Amended) An orthopedic implant assembly, comprising:

a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore[,] extending through the stabilizing element from the anterior surface to the posterior surface and the bore having an anterior bore portion[,] and a posterior bore portion which has a posterior opening with a transverse dimension smaller than [a] the transverse dimension of the anterior bore portion; [and]

b. a stopping member which is at least partially disposed within the bore of the stabilizing element[,] and which [defining] defines at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than [[a]] the transverse dimension of the anterior bore portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration; and

c. a securing element configured to be slidably disposed within the bore of the stabilizing element having an elongated body and [a head] an enlarged integral

portion, the enlarged integral portion having [which has] a maximum transverse dimension greater than the transverse dimension of the first transverse configuration of the stopping member passageway and greater than a transverse dimension of the posterior opening in the posterior bore portion [of the bore] in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained between the stopping member and [the smaller transverse dimension in] the posterior opening in the posterior bore portion and the elongated body having a maximum transverse dimension less than the posterior opening in the posterior bore portion so that the securing element is angularly displaceable within the posterior bore portion of the bore.

64. (Amended) The [intracorporeal medical device] assembly of claim 63 wherein the stopping [surface] member is configured to prevent the back-out of the [second component] securing element through the bore of the [first component] stabilizing element.

65. (Amended) The assembly of claim 63 wherein the stopping member is biased to the first transverse configuration.

66. (Amended) The assembly of claim 65 wherein the stopping member comprises a biased collar having a passageway therethrough.

67. (Amended) The assembly of claim 63 wherein the [head] enlarged integral portion of the securing element has a curved posterior surface.

68. (Amended) The assembly of claim 66 wherein the bore has a groove in an anterior portion thereof configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (Amended) The assembly of claim [67] 68 wherein the [head of the

securing element has a] curved posterior surface of the enlarged integral portion of the securing element [and which] is configured to [contact the collar anterior surface and] expand the collar as the [head] enlarged integral portion of the securing element is displaced posteriorly through [a] the collar passageway [of the collar].

70. (Amended) The assembly of claim 69 wherein the [head of the securing element has a] curved posterior surface of the enlarged integral portion of the securing element [which] has a minimum transverse dimension smaller than [the] a transverse dimension of the passageway of the unexpanded collar, and which is configured to contact [the] an [collar] anterior surface of the collar and deflect the collar away from a longitudinal axis of the [transverse] collar passageway as the [head] enlarged integral portion of the securing element is displaced posteriorly through the collar passageway.

71. (Amended) The assembly of claim [66] 70 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (Amended) The assembly of claim 71 wherein [a] the posterior bore portion [is] has a curved posterior surface that is [and] configured to receive at least in part the curved posterior surface of the [head] the enlarged integral portion of the securing element.

73. (Amended) The assembly of claim 63 wherein the [head] enlarged integral portion of the securing element is configured to be longitudinally displaceable [between a posterior surface of the stopping member and] within the posterior bore portion of the bore of the stabilizing element.

74. (Amended) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the [transverse dimension of the

posterior portion of the bore] second opening of the stabilizing element, and wherein the securing element may be angularly displaced within [the] a posterior portion of the bore of the stabilizing element.

75. The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. The assembly of claim 13 wherein the stabilizing element has a [curved] concave posterior surface.

78. (Amended) The assembly of claim [1] 10 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (Amended) The assembly of claim [1] 10 wherein the securing element is selected from the group consisting of screws and nails.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Cancelled)

84. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior bore portion, a posterior bore portion with a transverse dimension smaller than a transverse dimension of the anterior portion, [and]
- b. a stopping member at the anterior portion of the bore; and

[b]c. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (Cancelled)

88. The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

89. (Amended) [In an]An orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior

surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral [head] portion with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient radially deflectable [stopping] member which is configured to engage a surface of the assembly and to retain the enlarged integral portion of the securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element [and which is slidably disposed within a groove provided within the assembly].

90. (Amended) The assembly of claim 89 wherein the [stopping] radially deflectable member comprises a biased collar.

91. The assembly of claim 90 wherein the biased collar has a first configuration and is elastically deformable to a second configuration.

92. The assembly of claim 91 wherein the second configuration is an expanded configuration.

93. (Amended) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the [head] enlarged integral portion of the securing element is retained [between anterior and] within the posterior [portions] bore portion [of the bore].

94. (Amended) [In an] An orthopedic implant assembly which has a

stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion, a posterior bore portion having a posterior opening with a transverse dimension smaller than a transverse dimension of the anterior bore portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior opening of the posterior bore portion [of the bore] in the stabilizing element, [the improvement comprising] characterized by:

a resilient longitudinally deflectable [stopping] member which is configured to engage a surface of the assembly to retain the enlarged integral head of securing element within the posterior bore portion and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (Amended) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when the [stopping member] securing element [passes by the engaged surface when advancing] is advanced posteriorly through the bore of the stabilizing element.

96. (Amended) An orthopedic implant assembly, comprising:

- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a posterior opening with a transverse dimension smaller than the transverse dimension of the anterior bore portion; and

- b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse [cross-sectional] dimension of the bore [passageway] and which is elastically deformable to a second configuration [which] that increases the at least one transverse [cross-sectional] dimension reduced by the biased stopping member in the first configuration; and
- c. a securing element having an elongated body and an enlarged integral [head] portion which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by the first configuration of the biased stopping member and greater than a transverse dimension of the posterior opening of the posterior bore portion in the stabilizing element, so that the [head] enlarged integral portion of the securing element is retained [between the biased stopping member and] within the posterior bore portion [of the bore].

97. (Amended) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the enlarged integral [head] portion of the securing element by the stopping member.

98. The orthopedic implant assembly of claim 97 wherein the biased stopping member elastically returns from the second configuration back to the first configuration.

99. The assembly of claim 96 wherein the biased stopping member comprises a collar.

100. The assembly of claim 99 wherein the biased [stopping member] collar is disposed in part within a recess of the stabilizing element.

101. The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (Amended) [An orthopedic] The attachment [member] assembly of claim 29, [comprising:] wherein

- [a. an attachment component which has at least one bore configured to receive a securing component with an enlarged integral portion, the bore] having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion;]
- [b.] the stopping member is a biased stopping member [surface] which reduces a transverse configuration of the [first] anterior bore [passageway] portion to retain the enlarged integral portion of [a] the securing component within the bore of the attachment [component between the stopping surface and] member within the [second] posterior bore [passageway] portion[; and]
- [c. a third bore passageway portion between the biased stopping member and] the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing component received by the bore].

103. (Amended) The [orthopedic] attachment [member] assembly of claim 102 wherein the biased stopping member is elastically deformable from [the] a first configuration to a second configuration which increases the [at least one] transverse

[cross-sectional] dimension reduced by the biased stopping member in the first configuration.

104. (Amended) The [orthopedic] attachment [member] assembly of claim 103 wherein the biased stopping member is elastically deformed by the passage of [an] the enlarged integral portion of the securing [component] member.

105. (Amended) The [orthopedic] attachment [member] assembly of claim 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing [component] member.

106. (Amended) The [orthopedic] attachment assembly of claim 31 wherein [the] a posterior surface of the posterior bore [passageway] portion is configured to conform at least in part to the posterior surface of the enlarged integral portion of [a] the securing member so as to facilitate angular displacement within the posterior bore [passageway] portion.

107. (New) An orthopedic implant assembly suitable for attachment to a bone which has a stabilizing element having an anterior surface, a posterior surface and at least one bore extending through the stabilizing element from the anterior surface to the posterior surface with an anterior bore portion and a posterior bore portion having a transverse dimension smaller than a transverse dimension of the anterior bore portion, which has a stopping member having a passageway therethrough at an anterior bore portion and which has a securing element having an elongated body and an enlarged integral portion with a maximum transverse dimension greater than a transverse dimension of the posterior bore portion in the stabilizing element, characterized by:
the enlarged portion of the securing element

being at least in part reversibly compressible from a first configuration with a first transverse dimension to a second configuration with a second smaller transverse dimension that is less than the smallest transverse dimension of the passageway through the stopping member,

the compressible part of the enlarged integral portion of the securing element being biased towards the first configuration,

the enlarged integral portion of the securing element being configured to contact the stopping member so as to compress the compressible part of the enlarged integral portion of the securing element to its compressed configuration as the enlarged integral portion is displaced posteriorly through the stopping member passageway,

whereby the assembly can be attached to the bone with a single motion of advancing the securing element through the stopping member passageway and into the bone.

108. (New) The assembly of claim 107 wherein the compressible part of the enlarged integral portion of the securing element comprises a biased collar.

109. (New) The assembly of claim 108 wherein the biased collar is elastically deformable to the second configuration.

110. (New) The assembly of claim 108 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the enlarged integral portion of the securing element is retained within the posterior bore portion.

111. (New) The assembly of claim 107 wherein the compressible part of the

enlarged integral portion of the securing element comprises at least one circumferentially disposed member.

112. (New) The assembly of claim 111 wherein the at least one circumferentially disposed member has a posterior end secured to the securing element.

113. (New) The assembly of claim 112 wherein the securing element comprises a plurality of circumferentially disposed members having posterior ends secured to the securing element.

114. (New) The orthopedic attachment assembly of claim 29 wherein the posterior bore portion has a length sufficiently greater than the length of the enlarged integral portion of the securing member so that the enlarged integral portion of the securing member is longitudinally displaceable within the posterior bore portion when retained therein.

REMARKS

Interview with the Examiner

The applicant wishes to thank the Examiner for the courtesies extended to applicant and applicant's counsel during the personal interview held on November 16, 2006. Details of the interview are referred to below.

Objections to Oath

The Examiner has objected to the oath because it fails to identify at least one error which is relied upon to support the reissue application. Applicant neglected to check the box indicating that the basis for the reissue was due to the patentees claiming less than they had a right to claim in the patent. However, such basis is implicit with the statement at the bottom of page one of the Declaration (re broadened claims) that clearly indicated that the error upon which the reissue application was based was due to the patentees claiming less than they had a right to claim. Applicant has filed concurrently herewith a new Declaration with at least one box checked indicating that they believed the original patent to be wholly or partly inoperative or invalid because they had claimed less in the patent than they had a right to claim.

The Examiner has also objected to the application under 37 C.F.R. §1.172(a) as lacking a written consent of all assignees owning an undivided interest in the patent. In applicant's Response To Notice To File Missing Parts To Reissue Application, applicants filed a Consent Of Assignee To Reissue in which Acantha LLC is identified as the assignee. The Assignment, which was recorded on Reel 012967, Frame 0893, indicates that Acantha is the owner of the entire right, title and interest to the application. David Talaber is Managing Member of the assignee and is empowered to

sign the consent which was filed as indicated in the attached copy of the Articles of Incorporation for Acantha LLC (See Article 2 of the Articles of Incorporation which is attached hereto).

Objection to Claim 39

The Examiner has objected to claim 39 because there was no indication from which claim the claim depended. In response applicant has amended claim 39 to indicate that it depends from claim 37.

Rejections under 35 U.S.C. §112(2)

The Examiner rejected claims 52-53, 59, and 103-105 under 35 U.S.C. §112(2) as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and specifically that the expressions "the stopping member" and the "the biased stopping member" lack antecedent basis.

Applicant has amended claims 52, 59 and 103 to obviate the indicated rejection.

Rejections under 35 U.S.C. §102 Based On Errico et al.

The Examiner has rejected claims 29-39, 41-48, 50-51, 60-71, 73 and 89-105 under 35 U.S.C. §102(b) as being anticipated by Errico et al.(U.S. Pat. No. 5,876,402). During the aforesaid interview, the Examiner contended that Errico et al. discloses a second bore passageway portion configured to conform to and retain the enlarged portion or head of the securing component. The Examiner expressed the belief that the claim language with respect to the bore was not specific enough to overcome the Errico et al. reference. However, as noted by the applicants during the interview the amended claims require the posterior bore portion to have a posterior surface configured to engage the enlarged integral portion of a securing member and to retain the enlarged

integral portion of the securing member within the posterior bore portion. The transverse dimensions of applicant's posterior bore portion in part (e.g. posterior opening) is smaller than the transverse dimensions of the enlarged integral portion or head of the securing member. Errico et al. has an enlarged integral portion (122) but it is not larger than the posterior opening of the bore (hole 110) and it never engages a posterior surface of the posterior bore portion. The posterior surface of the posterior bore portion of Errico engages the outer surface of coupling element (132) not the integral head (122). The integral head (122) of Errico et al. is disposed within the interior of the coupling element. The coupling element (132) of Errico et al. contacts the posterior surface of the posterior bore portion but it is not integral with the head (122) or the shaft (126) so it is not an integral part of the screw or securing member (120). Therefore, the Errico et al. reference does not teach every feature of the claimed invention and cannot anticipate the rejected claims.

During the interview, the Examiner indicated that the location and direction of the bore in the proposed amended claims is not clear and contended that such lack of clarity in the claims allowed the application of Errico et al. against the claims. While applicant disagrees with the Examiner, applicants have amended each of the independent claims to clarify the location and direction of the bore. Specifically, the claims require the attachment member or stabilizing element to have an anterior surface, a posterior surface and a bore that extends from the anterior surface to the posterior surface. The Examiner indicated that the use of the terms "anterior" and "posterior" might not be definitive. However, these terms are common terms with respect to orthopedic devices and their meaning is clear in the specification.

With these amendments, applicant believes that the rejection of the above claims based on Errico et al. has been overcome.

Rejections under 35 U.S.C. §102 Based On Estes

The Examiner has rejected claims 60-67, 73-79 and 89-95 under 35 U.S.C. §102(e) as being anticipated by Estes (U.S. Pat. No. 5,578,034). The device described in the Estes reference has a securing member with an integral head, but the head is retained in the anterior bore portion not the posterior bore portion of the attachment member as required by the rejected claims. The Estes device does not have the structure required by these claims, so this reference cannot anticipate these claims.

Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claim 49 contending that those skilled in the art would find the use of titanium or superelastic materials as being obvious. However, claim 49 depends from claim 37 which as discussed above should be in allowable condition based upon the amendments made to this claim. Claim 49 should likewise be allowable.

New Prior Art

Applicant wishes to bring to the attention of the Examiner for consideration the references listed on the attached PTO-1449. These references were brought to applicants attention after receipt of the Office Action mailed on September 8, 2006. Applicant have carefully reviewed these references and believe that they do not appear to be any more pertinent than the references already considered in this application. Enclosed herewith are copies of the foreign patent documents listed in the attached PTO-1449.

Conclusions

Applicant notes with appreciation the Examiner's allowance of claims 1-28, 51, 54-58 and 74-88 and the indication that claims 40 and 72 are directed to patentable subject matter. Applicant has amended some of the allowed claims to clarify and simplify the language. Moreover, applicant has converted independent claims 60 and 102 to depend from claim 29 and have cancelled duplicate claims (claims 60-61 and 80-83) to reduce the number of claims to be examined. Applicant believes that all of the presently pending claims are directed to patentable subject matter. Reconsideration of the pending claims and an early allowance thereof are earnestly solicited.

Pursuant to 37 C.F.R. §1.173(c) applicant has attached hereto a chart listing the status and support for the claims and amendments thereto.

Respectfully submitted:

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12-08-06



Reissue
IFW
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for
Patent No.: 6,261,291
Issued: July 17, 2001
Inventors: Talaber et al.
Reissue Serial No.: 10/620,154
For: **ORTHOPEDIC IMPLANT
ASSEMBLY**
Filed: July 15, 2003

Examiner: Anuradha Ramana
Group Art Unit: 3731
Atty. Docket No.: R0372-00101

TRANSMITTAL

Express Mail Label No.: EQ 810561846 US
Mailed on: December 7, 2006

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

- Transmitted herewith for filing in the above-identified patent application are:
 X Amendment And Response To Office Action Mailed 09/08/2006 including;
 X Status And Support For Claim Amendments Pursuant To 37 CFR
 §1.173(c);
 X Reissue Application Declaration By The Inventor (4 sheets);
 X Limited Liability Company Agreement of Acantha, LLC (Articles of
 Incorporation);
 X Form PTO-1449 and copies of 2 cited references;
 X Self-stamped return receipt postcard.

2. Claims Fee Calculation

Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	10 - 16 =	0 x	\$200=	\$0.
Total Claims	1205	106 - 105 =	1 x	\$50=	\$50.

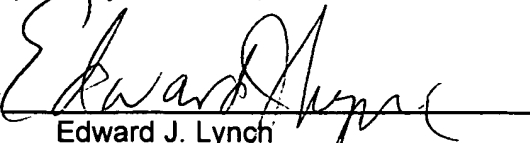
Total Claim Fees Due..... \$50.

3. Payment of Fees

X The Commissioner is authorized to charge the fees due and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. **A duplicate copy of this transmittal is enclosed.**

Respectfully submitted,

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**Status And Support For Claim Amendments
Pursuant To 37 CFR §1.173(c)**

Claims	Support (Ref. to Issued Patent)
Claims 1-28	Original patent claims.
Claim 29	Figs. 1-6; Col. 4, line 13-col. 6, line 16; Figs 13-15
Claim 30	Figs. 3-5; Col. 4, line 64-col 5, line 30
Claim 31	Fig. 5, Col 4; line 64-col. 5, line 20
Claim 32	Cancelled
Claim 33	Fig. 5; Col. 5, lines 59-67
Claim 34	Figs. 1-6
Claim 35	Figs. 1-6
Claim 36	Fig. 3; Col. 1, lines 42-55
Claim 37	Fig. 4; Col. 1, lines 45-47; Col. 5, lines 2-15
Claim 38	Figs. 3-5; Col. 4, lines 31-33
Claim 39	Figs. 2-5
Claim 40	Fig. 13
Claim 41	Cancelled
Claim 42	Figs. 5-6; Col. 5, lines 46-67
Claim 43	Fig. 1
Claim 44	Fig. 1; Col. 7, lines 52-57
Claim 45	Col. 7, lines 47-57
Claim 46	Col. 7, lines 49-52
Claim 47	Col. 2, lines 6-8
Claim 48	Col. 6, lines 1-3
Claim 49	Col. 6, lines 1-3
Claim 50	Figs. 2-6
Claim 51	Figs. 3-5
Claim 52	Col. 2, lines 19-46
Claim 53	Col. 2, lines 61-67
Claim 54	Figs. 7-12; Col. 6, lines 17-54
Claim 55	Figs 8 and 10. Col. 6, lines 31-50
Claim 56	Figs. 7-12
Claim 57	Figs. 7, 8 and 10

Claim 58	Figs. 8, 10 and 12
Claim 59	Figs. 7-12; Col. 2, lines 46-60
Claim 60	Figs. 2, 3, 4, 5 and 6; Col. 5, lines 30-42
Claim 61	Cancelled
Claim 62	Cancelled
Claim 63	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs13-15; Col. 5, lines 51-59
Claim 64	Col. 5, lines 21-30
Claim 65	Col. 5, lines 15-20
Claim 66	Col. 5, lines 2-8
Claim 67	Col. 5, lines 30-33
Claim 68	Figs. 3, 4 and 5; Col. 4, lines 31-33
Claim 69	Fig. 4; Col. 5, lines 2-8
Claim 70	Fig. 4; Col. 5, lines 2-8
Claim 71	Figs. 13-14; Col. 6, lines 55-67
Claim 72	Fig. 14
Claim 73	Fig. 14
Claim 74	Fig. 6; Col 5, lines 46-67
Claim 75	Fig. 1; Col 7, lines 62-67
Claim 76	Fig. 1, Col 7, lines 52-57
Claim 77	Col. 7, lines 52-57
Claim 78	Col. 7, lines 49-52
Claim 79	Col. 2, lines 6-8
Claim 80	Cancelled
Claim 81	Cancelled
Claim 82	Cancelled
Claim 83	Cancelled
Claim 84	Figs13-15; Col. 5, lines 51-59
Claim 85	Figs13-15; Col. 5, lines 51-59
Claim 86	Figs13-15; Col. 5, lines 51-59
Claim 87	Cancelled
Claim 88	Figs. 8, 10 and 12
Claim 89	Figs. 1-6; Col. 4, line 13-col. 6, line16; Figs 7-12; Col. 6, lines 16-54; Col. 7, lines 62-67
Claim 90	Fig. 3; Col. 1, lines 42-55
Claim 91	Fig. 3; Col. 1, lines 42-55

Claim 92	Figs. 3-5; Col.4, lines 31-33
Claim 93	Col.2, lines 61-67
Claim 94	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 95	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 96	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 97	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 98	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67
Claim 99	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67, Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 100	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 101	Figs. 7-12; Col 2, lines 46-60; Col. 7, lines 62-67; Figs. 2-6, lines Col. 4, line 13-col. 6, line16
Claim 102	Figs. 5 and 6; Col. 2, lines 34-38
Claim 103	Fig. 2; Col. 4, lines 14-44
Claim 104	Col. 4, lines 31-33; Col. 6, lines 1-3
Claim 105	Figs. 4-5; Col. 5, lines 15-20
Claim 106	Figs. 5-6, lines 51-67
Claim 107	Figs. 7-12; Col. 6, lines 17-54
Claim 108	Figs. 2-12; Col 6, lines 17-54; Col. 7, lines 62-67
Claim 109	Col. 6, lines 1-2; Col. 7, lines 62-67
Claim 110	Col. 1, lines 42-67; Col. 7, lines 62-67
Claim 111	Figs. 7-12; Col. 6, lines 17-54
Claim 112	Figs. 7-12; Col. 6, lines 17-54
Claim 113	Figs. 7-12; Col. 6, lines 17-54
Claim 114	Fig. 5; Col. 5, lines 46-51



PTO/SB/51 (10-05)
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REISSUE APPLICATION DECLARATION BY THE INVENTOR

Docket Number (Optional)

R0372-00101

I hereby declare that:

Each inventor's residence, mailing address and citizenship are stated below next to their name:

I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 6,261,291 granted July 17, 2001 and for which a reissue patent is sought on the invention entitled

ORTHOPEDIC IMPLANT ASSEMBLY

the specification of which

☒ is attached hereto.

☐ was filed on _____ as reissue application number _____

and was amended on _____
(if applicable)

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

☐ I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.

☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.

☐ by reason of other errors.

At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:

The new claim 29 is broader than issued claims 1 and 23 of the U.S. Patent No. 6,261,291 in several aspects. New claim 29 includes a "stopping member" which does not require "a biased stopping member" as set forth in the issued claims. Moreover, claim 29 calls for a bore with posterior and anterior bore portions.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.178. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9198 and select option 2.

Under the Paperwork Reduction Act of 1980, no persons are required to respond to a collection of information unless it displays a valid OMB control number.				Docket Number (Optional)	
(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)				R0372-00101	
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.					
Note: To appoint a power of attorney, use form PTO/SB/51.					
Correspondence Address: Direct all communications about the application to:					
☐ The address associated with Customer Number: [Redacted]					
OR					
☒ Firm or Individual Name		Edward J. Lynch			
Address		One Market Spear Tower, Suite 2000			
City	San Francisco	State	CA	Zip	94105
Country		United States of America			
Telephone	415 957-3067	Email	ejlynch@duanemorris.com		
WARNING: Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.					
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.					
Full name of sole or first inventor (given name, family name)					
David J. Talaber					
Inventor's signature				Date	
Residence 5185 Charlotte Way, Livermore, CA 94550				Citizenship U.S.	
Mailing Address Same					
Full name of second joint inventor (given name, family name)					
James R. Lloyd					
Inventor's signature James R. Lloyd				Date 12/04/06	
Residence 1080 Circle Dr., Elm Grove, WI 53122				Citizenship U.S.	
Mailing Address Same					
☐ Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.					



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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/51 (10-05)

REISSUE APPLICATION DECLARATION BY THE INVENTOR

Docket Number (Optional)

R0372-00101

I hereby declare that
Each inventor's residence, mailing address and citizenship are stated below next to their name:
I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed
in patent number 6,261,291 granted July 17, 2001 and for which a
reissue patent is sought on the invention entitled _____

ORTHOPEDIC IMPLANT ASSEMBLY

the specification of which

☒ is attached hereto.

☐ was filed on _____ as reissue application number _____

and was amended on _____
(if applicable)

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any
amendment referred to above.
I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

☐ I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or
equivalent) listing the foreign applications.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described
below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.

☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.

☐ by reason of other errors.

At least one error upon which reissue is based is described below. If the reissue is a broadening
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**The new claim 29 is broader than issued claims 1 and 23 of the U.S. Patent
No. 6,261,291 in several aspects. New claim 29 includes a "stopping member"
which does not require "a biased stopping member" as set forth in the issued
claims. Moreover, claim 29 calls for a bore with posterior and anterior
bore portions.**

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO
to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 30 minutes to complete,
including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on
the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and
Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS
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Docket Number (Optional)

R0372-00101

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.

Note: To appoint a power of attorney, use form PTO/SB/81.

Correspondence Address: Direct all communications about the application to:

☐ The address associated with Customer Number.

OR

☒ Firm or Individual Name	Edward J. Lynch				
Address	One Market Spear Tower, Suite 2000				
City	San Francisco	State	CA	Zip	94105
Country	United States of America				
Telephone	415 957-3067	Email	ejlynch@duanemorris.com		

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of sole or first inventor (given name, family name)

David J. Talaber

Inventor's signature

David J. Talaber

Date

12/4/06

Residence

5185 Charlotte Way, Livermore, CA 94550

Citizenship

U.S.

Mailing Address

Same

Full name of second joint inventor (given name, family name)

James R. Lloyd

Inventor's signature

Date

Residence

1080 Circle Dr., Elgin Grove, WI 53122

Citizenship

U.S.

Mailing Address

Same

☐ Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.



LIMITED LIABILITY COMPANY AGREEMENT

OF

ACANTHA, LLC

THESE INTERESTS HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER ANY FEDERAL OR STATE SECURITIES LAWS. THESE INTERESTS ARE SUBJECT TO RESTRICTIONS ON TRANSFER AND MAY NOT BE TRANSFERRED EXCEPT AS PERMITTED UNDER FEDERAL AND STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THIS INVESTMENT FOR AN INDEFINITE PERIOD OF TIME.

LIMITED LIABILITY COMPANY AGREEMENT
OF
ACANTHA, LLC

This Limited Liability Company Agreement (this "Agreement") of Acantha, LLC, a Delaware limited liability company (the "Company") is entered into as of May 12, 2002 (the "Effective Date"), by and among David J. Talaber (the "Managing Member"), James R. Lloyd, M.D., Mark Robinson and Mark Schroeder, Esq. (collectively, the "Initial Members") and such other persons who are admitted as Members of the Company pursuant to the terms of this Agreement. Capitalized terms not otherwise defined in the Agreement are defined in Article 2.

BACKGROUND

A. On April 26, 2002, the Certificate of Formation (the "Certificate") for the Company was filed with the Delaware Secretary of State pursuant to the Delaware Limited Liability Company Act (the "Act").

B. Prior to the Effective Date, the Company did not engage in any business and did not acquire any assets.

C. Prior to the Effective Date, each of the Initial Members advanced certain funds (each, a "Prior Advance") in connection with developing and securing a patent for the Orthopedic Implant Assembly (US Patent #2,261,291) (the "Patent") and developing a cervical plate prototype. The Prior Advances will be treated as initial contributions to the capital of the Company by the Initial Members as of the Effective Date.

D. The Initial Members desire to enter into this agreement as their limited liability company agreement.

NOW, THEREFORE, the parties agree as follows:

ARTICLE 1
GENERAL PROVISIONS

1.1 Formation. Pursuant to the Act, the Members have formed a limited liability company under the laws of the State of Delaware by filing the Certificate with the Delaware Secretary of State and by entering into the this Agreement.

1.2 Name. The name of the Company is "Acantha, LLC," or such other name as the Managing Member from time to time may determine. Prompt notice of any change to the name will be given to all Non-Managing Members.

1.3 Principal Office. The Company's principal office will be located at 5185 Charlotte Way, Livermore, California 94550, or such other place as the Managing Member from

time to time may determine. Prompt notice of any change in the location of the principal office will be given to all Non-Managing Members.

1.4 Term. The term of the Company began on the date the Certificate was filed with the Delaware Secretary of State, and will continue until the Company is dissolved and its affairs wound up in accordance with this Agreement.

1.5 Registered Agent and Office. The Company will continuously maintain within the State of Delaware (i) a registered agent for service of process on the Company, which agent will be the person designated in the Certificate, as it may be amended from time to time, and (ii) a registered office which need not be a place of business, which office will be at the location stated in the Certificate, as it may be amended from time to time.

1.6 Business of the Company. The business and purpose of the Company will be to engage in any lawful business for which limited liability companies may be organized under the Act, including but not limited to:

(a) The development, production, marketing and exploitation for profit of the Patent, by way of license or sale, and/or by way of the manufacture and distribution of devices or products which incorporate the technology embodied in the Patent; and

(b) Such other activities related to the foregoing business as may be necessary or advisable in the opinion of the Managing Member to further such business.

1.7 Property. All property, real and personal, of the Company will be owned by, and legal title held in the name of, the Company, and any conveyance from or to the Company will be in the Company's name. No Member will have any ownership interest in the property of the Company. Each Member's interest in the Company will be personal property.

1.8 Partnership Classification. It is the intention of the parties hereto that the Company be treated as a partnership for federal and state income tax purposes. The Company will not elect to be treated as a corporation under section 1.7701-3(c) (or any corresponding applicable provisions of federal, state, foreign or local law), and the Company and each Member will file all tax returns and will otherwise take all tax and financial reporting positions in a manner consistent with such treatment.

ARTICLE 2 DEFINITIONS

The following terms used in this Agreement will have the meanings set forth below:

"Act" means the Delaware Limited Liability Company Act, as it may be amended from time to time.

"Affiliate" means, with respect to a specified person, any other person which directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with the person in question.

"Agreement" means this Limited Liability Company Agreement, as originally executed and as amended from time to time.

"Applicable Tax Rate" means the maximum combined federal income tax rate and state income tax rate of the state in which the Company has its principal place of business, applicable to individuals from time to time, taking into account the effect of the deductibility of the applicable state income taxes in computing federal income taxes.

"Bankruptcy Event" means, with respect to any person, (a) the entry of a decree or order for relief by a court having jurisdiction in respect of such person in an involuntary case under federal or state bankruptcy or insolvency law, or the appointment of a receiver, assignee, or trustee for such person or for any substantial part of his property, or the issuance of an order for the winding-up or liquidation of his affairs and the continuance of any such decree or order unstayed and in effect for a period of 90 consecutive days, or (b) the commencement by such person of a voluntary proceeding seeking any decree, order or appointment referred to in clause (a) or the consent by such person to any such decree, order or appointment.

"Capital Account" means an account maintained for each Member as provided in Section 4.1.

"Capital Contribution" means with respect to any Member the amount of money and the fair market value of any property other than money (net of liabilities assumed or taken subject to by the Company) contributed by the Member with respect to the Interest held by such Member, as determined by such Member and the Company.

"Certificate" means the Certificate of Formation for the Company filed with the Delaware Secretary of State, as amended from time to time.

"Code" means the Internal Revenue Code of 1986, as amended (or any corresponding provision of succeeding law).

"Company" means Acantha, LLC, a Delaware limited liability company.

"Default Interest Rate" means the highest rate of interest permitted under the laws of the state in which the Company has its principal office.

"Effective Date" means the effective date of this Agreement, as first set forth above.

"Initial Members" means David J. Talaber, James R. Lloyd, M.D., Mark Robinson and Mark Schroeder, Esq.

“Interest” means the entire ownership interest of a Member in the Company at any particular time, including the right of such Member to any and all benefits to which a Member may be entitled as provided in this Agreement.

“Majority in Interest” means Members holding more than 50% of the Percentage Interests held by all Members.

“Managing Member” means David J. Talaber, and any additional or substitute managing member admitted to the Company in accordance with the terms of this Agreement.

“Member” means each person who is listed on Appendix A as a Member, and any additional or substitute Member admitted to the Company in accordance with the terms of this Agreement, except as otherwise provided herein.

“Member Termination Event” means as to any Member, the occurrence of a Bankruptcy Event as to such Member, or as to any Member that is an individual, the death or adjudicated incompetency of such individual, or as to any Member that is a corporation, partnership or other entity, the dissolution of such entity.

“Net Income” or “Net Loss,” as the case may be, for any period, means an amount equal to the Company’s income or loss for such period as determined by the Company’s accountants in accordance with tax accounting principles consistently applied, with such adjustments as may be necessary or appropriate to comply with the provisions of Regulations Section 1.704-1(b)(2)(iv).

“Non-Managing Member” means any Member who is not the Managing Member.

“Patent” is defined in Recital C of this Agreement.

“Percentage Interest” as to each Member, means the percentage by which such Member’s interest in the Net Income or Net Loss of the Company generally will be measured. Except as otherwise expressly provided in this Agreement, Percentage Interests will be determined from time to time by dividing a Member’s aggregate Capital Contributions by the aggregate Capital Contributions of all the Members.

“Prior Advance” is defined in Recital A of this Agreement.

“Regulations” means the income tax regulations promulgated under the Code, as such regulations may be amended from time to time (including corresponding provisions of succeeding regulations).

“Transfer” means a sale, exchange, transfer, assignment, pledge, encumbrance or other disposition of an Interest, or a right to share in the Net Income or Net Loss of the Company or to receive distributions from the Company. “Transferee” means the recipient of a Transfer of an Interest, and “Transferor” means the person making such Transfer.

ARTICLE 3
CAPITAL CONTRIBUTIONS AND LOANS

3.1 Initial Contributions. Each Member's total initial Capital Contributions are set forth opposite such Member's name on Appendix A, and consist of the following components:

(a) Prior Advances. Each Initial Member will be deemed to have contributed to the capital of the Company as of the Effective Date the amount of his Prior Advance, as set forth opposite his name on Appendix A.

(b) Cash Contributed at Effective Date. As of the Effective Date, each Initial Member will contribute to the capital of the Company cash in the amount set forth opposite his name on Appendix A.

(c) Patent Assignment. On or around the Effective Date, certain of the Initial Members have assigned to the Company, as a contribution to capital, the Patent and all related rights, pursuant to that certain Patent Assignment, a copy of which is attached hereto as Exhibit A. Solely for purposes of determining the Members' initial Capital Account balances, no value is being given to the Patent and related rights, and no credit for such contribution is being made to the Capital Accounts of the Members who made that assignment.

3.2 Additional Contributions.

(a) Capital Calls. The Company has the right, in the Managing Member's sole discretion, to require the Initial Members to make additional Capital Contributions in one or more installments, in the aggregate amount of \$100,000 (a "Capital Call"). Each Initial Member hereby agrees to contribute in cash on or before the due date his share (based on each Member's Percentage Interest) of any Capital Call. Capital Calls, if made, will be made in accordance with this Section 3.2(a).

(i) Procedures for Capital Calls. The Managing Member will make a Capital Call by delivering notice to each of the Initial Members. Such notice will set forth the amount being called, each Member's share (based on respective Percentage Interests) of the Capital Call and the due date of such payment. Any such notice will be delivered at least five (5) business days prior to such due date.

(ii) Enforcement of Contributions. In the event any Initial Member fails to contribute any portion of that Member's Capital Call when due, the Managing Member will give such Member (a "Delinquent Member") a notice of the failure (a "Default Notice"). If the Delinquent Member fails to cure the default (including any costs associated with such default, including the cost of demanding compliance with the call and interest at the Default Interest Rate on such obligation from the due date) within three (3) days of the giving of the Default Notice, the Managing Member may pursue any remedy in law or at equity that he may choose, in his discretion, including but not limited to:

(A) Enforcing the Capital Call in a court of appropriate jurisdiction in the state in which the Company's principal office is located.

(B) Allowing the other Initial Members to contribute the amount of the unpaid Capital Call (in proportion to their respective Percentage Interests). Those Members who elect to contribute (the "Contributing Members") will be entitled to treat the amounts contributed pursuant to this Section 3.2(a)(ii)(B) either:

(1) as loans to the Delinquent Member, in which case such loans will bear interest at the Default Interest Rate, secured by the Delinquent Member's Interest in Company, and until they are fully repaid, the Contributing Members will be entitled to receive all distributions to which the Delinquent Member would have been entitled, such distributions to be credited first to the payment of interest, and then to the repayment of the principal amount loaned; or

(2) as additional Capital Contributions, in which case, each Contributing Member's Percentage Interest will be adjusted in accordance with the definition of "Percentage Interest" under this Agreement.

(C) Having the Company redeem the Delinquent Member's Interest for the lesser of (A) the Capital Contributions made by such Member (reduced by any previous distributions to such Member), or (B) such Member's Capital Account balance.

(b) No Further Requirement. Except as provided in Section 3.2(a), no Member will have any further obligation to make any additional Capital Contributions (or to provide any additional funds) to the Company for any reason. If the Company needs additional funds for any reason, the Managing Member may cause the Company to seek and accept additional capital in exchange for the issuance of additional Interests to new or existing Members on such terms as the Managing Member determines to be fair and appropriate and without the other Members' consent, provided that all existing Members are given the opportunity to participate in the purchase of such additional Interests on the same terms as are offered to others.

3.3 Loans by Members. No Member will be required to make loans to the Company. Loans may be made, however, by any Member to the Company and will not be considered Capital Contributions. The amount of any such loan will be a debt due from the Company to such lending Member. The terms and conditions of such loans will be determined by the Managing Member and, if the Managing Member is the lender, such terms will not be less favorable to the Company than the terms and conditions that the Managing Member determines that the Company could obtain from commercial lenders.

ARTICLE 4 CAPITAL ACCOUNTS, DISTRIBUTIONS AND ALLOCATIONS

4.1 Capital Accounts.

(a) General. A Capital Account will be maintained for each Member in accordance with Regulations Sections 1.704-1(b) and 1.704-2. Each Member's Capital Account generally will equal that Member's Capital Contributions, increased by allocations of Net Income

and other items of income and gain, and reduced by distributions and by allocations of Net Loss and other items of loss and deduction.

(b) Transfers. If any Interest in the Company is transferred in accordance with the terms of this Agreement, the Transferee will succeed to the Capital Account of the Transferor to the extent it relates to the transferred Interest.

(c) Discretion to Modify. The foregoing provisions and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Regulations Sections 1.704-1(b) and 1.704-2, and will be interpreted and applied in a manner consistent with such Regulations. If the Managing Member determines that it is prudent to modify the manner in which the Capital Accounts, or any debits or credits thereto, are computed to comply with such Regulations, the Managing Member may make such modification, provided that he determines that such modification will have no material adverse effect on the aggregate amounts distributable to any Member pursuant to this Agreement.

4.2 Distributions.

(a) General. Distributions will be made at such times and in such amounts as may be approved by the Managing Member, after paying, or establishing sufficient reserves for, all Company expenses, including debt payments, fees, reimbursements and contingencies. Distributions, if any, will be made to the Members in proportion to their Percentage Interests.

(b) Tax Distributions. The Managing Member will endeavor to cause distributions to be made each year in an amount at least equal to the Applicable Tax Rate multiplied by the taxable income of the Company.

(c) Distributions in Kind. If any assets of the Company are distributed in kind, such assets will be distributed on the basis of the fair market value thereof, as reasonably determined by the Managing Member. All such distributions will be in the same proportion as if such distribution had been made in cash.

4.3 Allocation of Net Income and Net Loss. After giving effect to the special allocations set forth in Section 4.4, Net Income or Net Loss for any period will be allocated among the Members in accordance with their Percentage Interests.

4.4 Special Allocations.

(a) Compliance with 704(b) Regulations. Notwithstanding the foregoing, no allocation of any item under Section 4.3 will be made unless it would be considered, under the Regulations promulgated under Code Section 704(b) (the "704(b) Regulations"), either to have substantial economic effect, or to be in accordance with the Members' interests in the Company. To the extent necessary to comply with the foregoing, in lieu of the allocations set forth in Section 4.3, the Managing Member may cause the Company's items of income, gain, loss, deduction, expense or credit to be reallocated among the Members in such manner as he may, in his absolute discretion, determine to be fair and appropriate and consistent with the provisions of the 704(b) Regulations, including without limitation the provisions of Regulations Section 1.704-2(f) (minimum gain chargeback), Section 1.704-2(i)(4) (partner nonrecourse debt minimum gain

chargeback), and Section 1.704-1(b)(2)(ii)(d) (qualified income offset), each of which is incorporated herein by this reference.

(b) Avoiding Deficit Capital Accounts. Special allocations of income or gain may be made to any Member if the Managing Member determines that such Member's Capital Account otherwise would have a deficit Capital Account balance that (in absolute value) exceeds the maximum deficit balance that would be permitted under the 704(b) Regulations.

(c) Loss. If any allocations of loss, deduction, or expense would result in a deficit balance in a Member's Capital Account that would (in absolute value) exceed the maximum deficit balance that would be permitted under the 704(b) Regulations, some or all of such items may be reallocated to any other Members whose Capital Accounts would not have such excess deficit balances (in proportion to their respective interests).

(d) Subsequent Allocations. If any allocations are made under Sections 4.4(a) through (c) (the "Regulatory Allocations"), the Managing Member may take such Regulatory Allocations into account in making subsequent allocations of income, gain, loss, deduction, or expense, and may make such further special allocations as may be necessary or appropriate so as to prevent the Regulatory Allocations from distorting the manner in which Company distributions will be divided among the Members pursuant to this Agreement.

4.5 Tax Allocations. For purposes of reporting each Member's share of federal, state and any applicable local income taxes, items of income, gain, loss, deduction and credit will be allocated in accordance with the provisions of Code Section 704(c) and the Regulations promulgated thereunder, so as to properly take into account any variation between the adjusted tax basis and the book value of Company assets, using any method that complies with Regulations Section 1.704-3 as the Managing Member deems appropriate.

ARTICLE 5 MEMBERS

5.1 Limited Liability. Except as required under the Act or as expressly set forth in this Agreement, no Member will be personally liable for any debt, obligation, or liability of the Company, whether that liability or obligation arises in contract, tort, or otherwise.

5.2 Admission of Additional Members. Additional Members may be admitted from time to time pursuant to the terms of this Agreement. All additional Members will execute and deliver such number of counterpart signature pages to this Agreement as the Managing Member may require, evidencing such Member's intent to be bound by all of the terms and conditions of this Agreement. Appendix A will be amended (without the requirement of Member approval) to reflect each issuance of additional Interests. This Agreement will be deemed amended (without the requirement of Member approval) to accommodate any such admission of additional Members as determined by the Managing Member.

5.3 Voting Rights. Except as expressly provided in this Agreement, Non-Managing Members will have no voting, approval or consent rights.

5.4 Non-Managing Members Have No Managerial Authority. A Non-Managing Member in his capacity as such will have no power to participate in the management of the Company, except as expressly authorized by this Agreement. No Non-Managing Member, acting solely in his capacity as a Non-Managing Member, is an agent of the Company, nor has any power or authority to bind or act on behalf of the Company in any way, to pledge its credit, or to render it liable for any purpose, nor can any such Non-Managing Member, in such capacity, execute any instrument on behalf of the Company, unless expressly and duly authorized in writing to do so by the Managing Member.

5.5 Member Meetings and Approvals. No annual or regular meetings of the Members are required to be held. If any meetings are held, such meeting will be noticed, held and conducted in accordance with the Act. Any approval of the Members pursuant to this Agreement may be obtained in any manner provided for in the Act.

5.6 Withdrawals or Resignations. No Member may withdraw or resign from the Company except as specifically provided in this Agreement.

5.7 Confidentiality. Members will have access to information about the Company and its business (collectively, "Confidential Information") that is confidential and proprietary to the Company and that constitutes trade secrets. Such information may include business and marketing plans, techniques, and strategies; financial statements of the Company; databases, customer and prospect lists; projections, budgets, and salaries and other costs; know-how, formulae, discoveries, improvements, new products, and theories; and related legal documents. Each Member agrees not to use, publish, disseminate, misappropriate, or otherwise disclose any Confidential Information, either while such Member is a Member of the Company, or thereafter, except as may be required by applicable law. Each Member will take all reasonable precautions to protect the confidential nature of Confidential Information and all other documents or materials entrusted to such Member containing Confidential Information. All files, records, documents, statistical data, lists, and similar items relating to the Company's business are the property of the Company, and each Member agrees to return all of such property to the Company at such time that the Member ceases to be a Member.

5.8 Other Activities. The Members: (i) each acknowledge that Members, their respective Affiliates, and other related persons are or may be involved in other business, investment and professional activities, including serving as officers, directors, advisors and agents of other companies; and (ii) agree that each Member, his respective Affiliates, and other related persons may engage for their own accounts and for the accounts of others in any such ventures and activities (without regard to whether the interests of such ventures and activities conflict with those of the Company) and that (a) neither the Company nor any Member shall have any right by virtue of this Agreement or the existence of the Company in and to such ventures or activities or to the income or profits derived therefrom; and (b) each Member, his respective Affiliates, and other related persons shall have no duty or obligation to make any reports to the Members or the Company with respect to any such ventures or activities.

ARTICLE 6
MANAGEMENT OF THE COMPANY

6.1 Management and Powers Vested in Managing Member.

(a) General Authority and Power. Except as otherwise provided in this Agreement, the business, property and affairs of the Company will be managed by, and all powers of the Company will be exercised by or under the direction of, the Managing Member. Without limiting the generality of this Section 6.1, but subject to the express limitations set forth elsewhere in this Agreement, the Managing Member will have all necessary powers to manage and carry out the purposes, business, property, and affairs of the Company, including, without limitation, the power to exercise on behalf and in the name of the Company all of the powers permitted by law, including, without limitation, the power:

(i) To enter into license agreements, joint venture agreements, and other agreements respecting the Patent and the technology embodied therein;

(ii) To take action as necessary or appropriate to protect and preserve the assets of the Company, including the filing and prosecution of infringement actions;

(iii) To borrow funds and issue evidences of indebtedness on behalf of the Company on either a recourse or nonrecourse basis, and to pledge and hypothecate assets of the Company for such loans;

(iv) To employ from time to time, at the expense of the Company, persons required for the Company's activities, including accountants, attorneys and others, regardless of whether such persons also may be employed by the Managing Member or his Affiliates; to enter into and exercise on behalf of the Company, agreements and contracts with such persons on such terms and for such compensation as the Managing Member, in his sole discretion, determines to be reasonable; and to give receipts, releases, indemnities, and discharges with respect to all of the foregoing and any matter incident thereto as the Managing Member may deem advisable or appropriate;

(v) To purchase, from or through others, contracts of liability, casualty and other insurance that the Managing Member deems advisable, appropriate or convenient for the protection of the assets or affairs of the Company or for any purpose convenient or beneficial to the Company, including policies of insurance insuring the Managing Member and/or the Company against liabilities that may arise out of the Managing Member's management of the Company;

(vi) To cause the Company to sell or transfer all of its assets to a limited partnership, corporation or other entity, including by way of merger, conversion or otherwise;

(vii) To make all tax elections required or permitted to be made by the Company, including elections under Section 754 of the Code;

(viii) To file, conduct and defend legal proceedings of any type, including proceedings against Members, and to compromise and settle any such proceedings, or any claims against any person, including claims against Members, on whatever terms deemed appropriate by the Managing Member;

(ix) To engage in any kind of activity, and to perform and carry out contracts of any kind, necessary to, or in connection with, or incidental to the accomplishment of, the purposes of the Company; and

(x) To otherwise possess, exercise, and enjoy all rights and powers of a limited liability company to the extent permitted under the laws of the State of Delaware.

(b) Right of Others to Rely on Authority of Managing Member. The execution and delivery of any contract or instrument, or the taking of any action, by the Managing Member on behalf of the Company will be sufficient to bind the Company, and will not require the consent of any other Member.

6.2 Obligations of Managing Member. The Managing Member will devote such time as may be necessary for the proper performance of his duties under this Agreement, but the Managing Member will not be required to devote full time to the performance of such duties, nor be prevented from engaging in other activities for profit.

6.3 Expenses and Reimbursements. The Company will pay (or reimburse the Managing Member for) all expenses of the Company, including, without limitation: (A) all salaries, compensation, and fringe benefits of any personnel who may be employed by the Company; (B) all costs of borrowed money, taxes, and assessments with respect to the assets and operations of the Company; and (C) all legal and accounting fees and costs, including all fees and costs incurred in connection with the organization of the Company and the offering of Interests.

6.4 Officers. The Managing Member, at any time by written resolution, may appoint officers to whom he may delegate some or all of his duties, powers and responsibilities, including his specific powers and approval rights hereunder. The officers of the Company, if deemed necessary by the Managing Member, may include, without limitation, a chairperson, a chief executive officer, a president, one or more vice presidents, a secretary (and one or more assistant secretaries), and a chief financial officer or treasurer (and one or more assistants). The officers will serve at the pleasure of the Managing Member. Any individual may hold any number of offices. The general areas of responsibility and specific powers and duties of each officer may be set forth in written resolutions adopted by the Managing Member, which may be revised from time to time. Except as expressly provided in any contract of employment or similar agreement, any officer may be removed, either with or without cause, by the Managing Member at any time. Any officer may resign at any time by giving written notice to the Managing Member.

6.5 Liability and Indemnification of Managing Member.

(a) Limitation on Duties. To the fullest extent permitted by law, whenever in this Agreement the Managing Member approves or disapproves any action (whether in his capacity as Managing Member, as a Member generally, or otherwise), he will be entitled to consider only such interests and factors as he desires and may consider his own interests, and will

have no duty or obligation (fiduciary or otherwise) to give any consideration to any interest of or factors affecting the Company or the other Members. The Company and each Member hereby agrees that the provisions of the preceding sentence, to the extent they restrict or limit the duties (including, without limitation, fiduciary duties) or liabilities of the Managing Member that may otherwise exist at law or in equity, will replace such other duties and liabilities of the Managing Member.

(b) Limitation on Liability. The Managing Member and his agents and Affiliates will not be liable to the Company or to any other Member for any act or omission based upon errors of judgment or other fault in connection with the business or affairs of the Company (including, without limitation, any act or omission in connection with the termination of the Company or the winding up of its affairs or any distribution of its assets in connection therewith), except for any losses, claims, damages, liabilities or expenses that a court of competent jurisdiction finally determines resulted from the fraud or willful violation of law of such person.

(c) Indemnification. The Managing Member and his agents and Affiliates (each, an "Indemnitee") will be indemnified and held harmless by the Company from and against any and all losses, claims, damages, liabilities, expenses, judgments, fines, settlements, and other amounts (including attorneys and expert witness fees and expenses, as such fees and expenses are incurred) arising from all claims, demands, actions, suits or proceedings (civil, criminal, administrative or investigative), in which they may be involved, as a party or otherwise, by reason of their management of the affairs of the Company or rendering of advice or consultation with respect thereto, or which relate to the Company, its properties, business or affairs, whether or not they continue to be such at the time any such liability or expense is paid or incurred; provided, however, that no Indemnitee will be entitled to the foregoing indemnification to the extent a court of competent jurisdiction finally determines that such losses, claims, damages, liabilities, expenses or other amounts resulted from the fraud or willful violation of law of such Indemnitee. The Company may purchase and maintain insurance on behalf of a person who may be entitled to indemnification hereunder against any liability asserted against or incurred by such person in any such capacity or arising out of such person's status as such, if the Managing Member determines to do so.

(d) No Guarantee of Investment. No Indemnitee in any way guarantees the return of any Members' Capital Contributions or a profit for the Members from the operations of the Company. No Indemnitee will have personal liability for the repayment of the Capital Contributions of any Member. Except as otherwise provided in the Act, no Indemnitee will be bound by or personally liable for the expenses, liabilities or obligations of the Company, whether arising in contract, tort or otherwise, solely by reason of acting on behalf of the Company.

(e) Reliance. The Managing Member will be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any of its other Members, officers, employees or committees or by any other person, as to matters the Managing Member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company, including information, opinions, reports or statements as to the value and amount of the assets, liabilities, profits or losses of the Company or

any other facts pertinent to the existence and amount of assets from which distributions to Members might properly be paid.

6.6 Transactions With Managing Member or Affiliates. The Company may enter into transactions with the Managing Member or his Affiliates without obtaining the consent of the Members, provided that such transactions are on terms no less favorable to the Company than would be available from independent third parties.

6.7 No Removal. The Members will have no right to remove the Managing Member.

ARTICLE 7 BOOKS AND RECORDS; ACCOUNTING; TAX ELECTIONS

7.1 Books and Records. Books and records of the Company will be maintained at the principal office of the Company. The Company will maintain the following books and records:

(a) A current list of the name and last known business, residence or mailing address of each Member, together with the Capital Contributions and Percentage Interests of each Member;

(b) A copy of the Certificate and all amendments thereto;

(c) A copy of this Agreement and all amendments hereto;

(d) A copy of the Company's federal, state and local income tax or information returns and reports, if any, for the six most recent fiscal years;

(e) Financial statements of the Company for the six most recent fiscal years;
and

(f) Such other books and records as deemed appropriate by the Managing Member.

7.2 Inspection of Records.

(a) General. Subject to Section 7.2(b), each Member has the right, on reasonable request, but subject to such Member's agreement to maintain the confidentiality thereof, to:

(i) Inspect and copy (at his expense) during normal business hours and for any purpose reasonably associated with such Member's Interest, any of the Company records required to be maintained by Section 7.1 and such other information regarding the affairs of the Company as is just and reasonable; and

(ii) Obtain from the Company, promptly after they are available, a copy of the Company's federal, state, and local income tax or information returns for each year.

(b) Limitations. Despite anything to the contrary in this Agreement, the Non-Managing Members, will not be entitled to inspect or receive copies of the following:

(i) Internal memoranda of the Managing Member, whether relating to Company matters or any other matters;

(ii) Correspondence and memoranda of advice from attorneys or accountants for the Company or the Managing Member; or

(iii) Trade secrets and customer lists of the Company or the Managing Member, investor information, financial statements of Members, or similar materials, documents, and correspondence.

7.3 Reports. The Managing Member will cause the following to be prepared and provided to each Non-Managing Member:

(a) As soon as practicable after the end of each fiscal year, the information necessary for such Member to complete his federal and state income tax or information returns; and

(b) As soon as practicable after the end of each fiscal year, an annual financial report (which need not be audited) containing a balance sheet as of the end of the year and an income statement.

7.4 Tax Returns and Elections. The Company's tax and accounting year will end on December 31 of each year unless otherwise determined by the Managing Member and permitted by the Code. The Company's accountants will be instructed to prepare and file all required income tax returns for the Company. The Managing Member will make any tax election on behalf of the Company necessary for completion of the Company tax return.

7.5 Tax Matters Partner. The Members will not elect under Section 6231(a)(1)(B)(ii) of the Code to be governed by the "Tax Matter Partner" provisions of the Code. If the Company becomes subject to the provisions of Sections 6221 *et seq.*, the Managing Member will appoint a Tax Matters Partner.

7.6 Withholding and Tax Advances.

(a) Authority To Withhold. To the extent the Company is required by law to withhold or to make tax payments on behalf of or with respect to any Member (e.g., (i) backup withholding, (ii) withholding with respect to Members that are neither citizens nor residents of the United States) ("Tax Advances"), the Company may withhold such amounts and make such tax payments as may be required.

(b) Repayment of Tax Advances. All Tax Advances made on behalf of a Member will, at the option of the Managing Member, either be (i) promptly paid to the Company

by the Member on whose behalf such Tax Advances were made, or (ii) repaid by reducing the amount of the current or next succeeding distribution or distributions which would otherwise have been made to such Member (or, if such distributions are not sufficient for that purpose, by so reducing the proceeds of liquidation otherwise payable to such Member). Whenever the Managing Member selects option (ii) pursuant to the preceding sentence for repayment of a Tax Advance by a Member, for all other purposes of this Agreement, such Member will be treated as having received all distributions (whether before or upon liquidation) unreduced by the amount of such Tax Advance.

(c) Indemnification. Each Member hereby agrees to indemnify and hold harmless the Company from and against any liability with respect to Tax Advances made on behalf of or with respect to such Member.

(d) Certification. Each Member will promptly give the Company any certification or affidavit that the Company may request in connection with this Section 7.6.

7.7 Company Funds. The funds of the Company will be deposited in such banking or other financial institutions as the Managing Member will determine, and withdrawals will be made on such signature or signatures as the Managing Member may determine. No other funds will in any way be commingled with such Company funds. All deposits and other funds not needed in the operation of the business may be invested in such investments which the Managing Member reasonably considers appropriate.

ARTICLE 8 AMENDMENTS

8.1 General. Except as otherwise provided herein, any provision of this Agreement may be amended only with the consent of the Managing Member and a Majority in Interest of the Members; provided, however, that, except as expressly permitted in this Agreement, a Non-Managing Member's Percentage Interest may not be reduced in a disproportionate manner from other Members' Percentage Interests without obtaining the prior written consent of that Member.

8.2 Amendments Without Consent of Members. In addition to any amendments otherwise authorized herein, amendments may be made to this Agreement from time to time by the Managing Member, without the consent of any of the other Members: (a) to cure any ambiguity, to correct or supplement any provision herein which may be inconsistent with any other provision herein, or to make any other change or provision that is not material and does not adversely affect the rights of the Members; (b) to delete or add any provision of this Agreement required to be so deleted or added by any federal agency or by a state "securities" or "corporation" commission or similar body, which addition or deletion is deemed by such agency to be for the benefit or protection of the Members; and (c) to cause the provisions of Article 4 hereof to conform to the Code and any Regulations promulgated thereunder; provided, however, that no amendment will be adopted pursuant to this Section 8.2 unless the adoption thereof does not affect the limited liability of the Members under the Act or the status of the Company as a partnership for federal income tax purposes.

ARTICLE 9
TRANSFERS OF NON-MANAGING MEMBERS' INTERESTS

9.1 General Transfer Conditions. A Non-Managing Member may not Transfer all or any portion of his Interest unless the proposed Transferor or Transferee provides the Managing Member with such of the following documents and assurances as the Managing Member, in his discretion, may require:

(a) A duly executed and acknowledged written assignment in a form approved by the Managing Member specifying the Interest being Transferred;

(b) A written acknowledgement, in a form approved by the Managing Member, executed by each Transferee that such Transferee agrees to be bound by and subject to the provisions of this Agreement;

(c) An opinion of counsel, satisfactory to the Managing Member, that the Transfer will not violate any state or federal securities law, adversely affect either the tax status of the Company or the limited liability of any Member, or otherwise cause any adverse tax consequences to the Company or its Members;

(d) A transfer fee to the Company which is sufficient to cover all reasonable expenses connected with the Transfer, including legal fees; and

(e) Such other documents or instruments as the Managing Member may deem necessary or desirable in connection with such Transfer.

9.2 Consent Requirement. In addition to the requirements set forth in Section 9.1, except as provided in Section 9.3, a Non-Managing Member may not Transfer all or any portion of his Interest without obtaining the prior written consent of the Managing Member, which may be withheld in the Managing Member's absolute discretion.

9.3 Involuntary Transfer. A person may become an assignee of a Member's Interest, without obtaining the consent of the Managing Member, in the case of any Transfer caused by operation of law, including: (a) Transfer caused by a Member's death or legal incapacity; (b) Transfer caused by a Bankruptcy Event; (c) foreclosure (or Transfer instead of foreclosure) against a Member's Interest that was pledged or assigned as security for an obligation; (d) court order; (e) Transfer from the Transferee's spouse under a divorce decree or settlement; or (f) Transfer caused by the dissolution of a Member that is a legal entity. On the occurrence of any of these events, the Transferee will have only the rights of an unadmitted assignee under Section 9.4, and will not be admitted as a substitute Member unless such Transferee is approved as provided in Section 9.5. Any Transferee will be subject to the provisions of this Agreement.

9.4 Rights of Unadmitted Assignees. A person who acquires all or any portion of a Non-Managing Member's Interest (whether pursuant to Section 9.2 or 9.3 above), but who is not admitted as a substitute Member pursuant to Section 9.5 will be entitled only to distributions and allocations with respect to such Transferred Interest in accordance with this Agreement, and will have no right to any information or accounting of the affairs of the Company, will not be entitled

to inspect the books or records of the Company, and will not have any of the voting or other rights of a Member under the Act or this Agreement.

9.5 Substitute Member. A Transferee of a Non-Managing Member's Interest (whether pursuant to Section 9.2 or 9.3 above), may become a substitute Member only if the Managing Member consents in writing to the Transfer, which consent is within the sole discretion of the Managing Member. Furthermore, no Transferee will be considered admitted as a substitute Member unless and until such Transferee executes and delivers to the Company counterpart signature pages to this Agreement.

9.6 Effective Date of Transfer. Unless otherwise provided in this Agreement or in the Transfer documentation, any Transfer of a Member's Interest made in compliance with this Article 9 will be effective as of the close of business on the day on which all documentation required by this Article 9 has been received and accepted by the Company.

9.7 Effect of Violation. Any purported Transfer in violation of this Article 9 will be null and void and will not bind or be recognized by the Company.

9.8 Options on Certain Events.

(a) Option to Repurchase Interest. Upon the occurrence of a Member Termination Event as to a Non-Managing Member (an "affected Member"), the Managing Member will have the right, but not the obligation, to purchase and/or cause the Company to redeem the affected Member's Interest (the "affected Interest"), in accordance with this Section 9.8.

(b) Effective Date. The effective date of any purchase and/or redemption pursuant to this Section 9.8 will be the date on which the event giving rise to the purchase and/or redemption option occurs (the "Event Date"); provided that, if the date the Company receives actual notice of the occurrence of such event (the "Notice Date") occurs after the Event Date, the Company may elect, in the discretion of the Managing Member, to have the effective date be either the Event Date or the Notice Date. Notwithstanding that payment on account of any purchase and/or redemption may be made after the effective date thereof, any Member whose entire Interest is purchased and/or redeemed will not be considered a Member for any purpose after the effective date of such purchase and/or redemption.

(c) Exercise of Option. The Managing Member and/or the Company may elect to exercise their options to purchase and/or redeem the affected Interest at any time on or before the expiration of the 90th day following the later of the Event Date or the Notice Date. In order to exercise the option, the Managing Member must deliver Notice (an "Exercise Notice") to the affected Member prior to the expiration of the option, setting forth the event giving rise to the option, the Event Date and, if later, the Notice Date, the portion of the affected Interest the Managing Member is electing to purchase, the portion of the affected Interest that the Company is electing to redeem, and the proposed closing date of such purchase and/or redemption.

(d) Purchase Price. The amount paid (the "Purchase Price") for an affected Interest will be the "fair market value" of the affected Interest as of the effective date of the purchase and/or redemption. If not all of the affected Interest is being purchased and/or redeemed,

the Purchase Price will be proportionately reduced to reflect the percentage of the affected Interest that is being retained by the affected Member. For purposes of this Section 9.8, the "fair market value" of the affected Interest will be determined by an appraisal performed by a business valuation expert selected by the Managing Member who is qualified to appraise businesses similar to the Company, and will take into account appropriate discounts for lack of marketability and control.

(e) Terms. The Purchase Price to be paid upon the purchase and/or redemption of an affected Interest will be paid in such combination of cash and promissory notes ("Purchase Notes") as the Managing Member may elect, provided that at least 20% of the Purchase Price must be paid in cash at the closing, and any Purchase Note(s) for the balance shall bear interest from the effective date of the purchase and/or redemption at the Company's borrowing rate in effect as of the effective date and shall be payable in equal annual or more frequent installments over no more than five (5) years, and will be prepayable in whole or in part, without penalty.

(f) Closing. The closing of any purchase and/or redemption pursuant to the exercise of an option granted by this Section 9.8 will be held at the offices of the Company within 30 days following the completion of the appraisal referred to in Section 9.8(d). The Managing Member and the Company will each deliver at the closing their respective shares of any cash portion of the Purchase Price, and their respective Purchase Notes for their respective shares of the balance of the Purchase Price. Any portion of the affected Interest not purchased or redeemed will continue to be subject to the provisions of this Agreement, including this Section 9.8.

ARTICLE 10 TRANSFER OF MANAGING MEMBER'S INTEREST

10.1 Bankruptcy Event, Dissolution, Death or Incompetency. Because the occurrence of a Member Termination Event as to the Managing Member would render the Managing Member incapable of performing his duties under this Agreement, the Managing Member automatically will cease to be the managing member upon the occurrence of any such event. If the Managing Member ceases to be the managing member pursuant to this Section 10.1, and the Company is continued pursuant to Section 11.1(c), the Managing Member's Interest will be either (i) converted into a Non-Managing Member's Interest in accordance with Section 10.4, or (ii) purchased in accordance with Section 10.5.

10.2 Transfer of Managing Member's Interest. The Managing Member will not Transfer all or any part of his Interest in the Company to any person except (a) to a Transferee approved by a Majority in Interest of the other Members, (b) to an Affiliate of the Managing Member, or (c) if the Managing Member is an entity, to a successor entity that receives more than fifty percent (50%) of the Managing Member's equity interests or assets in connection with a merger, sale, reorganization or similar transaction with respect to the Managing Member. Any entity to which the Managing Member's Interest in the Company is transferred in compliance with this Section 10.2 will be substituted as the Managing Member by the filing of an appropriate amendment to this Agreement.

10.3 Withdrawal of Managing Member. The Managing Member may withdraw as the Managing Member without the consent of the other Members. If the Managing Member does withdraw pursuant to this Section 10.3, the Managing Member's Interest in the Company will be converted to a Non-Managing Member's Interest pursuant to Section 10.4.

10.4 Conversion of Managing Member's Interest. Upon the cessation of the Managing Member's status as a managing member for any reason other than as a result of a Transfer of such Managing Member's Interest pursuant to Section 10.2, unless the Managing Member or his personal representative or successor in interest exercise his or their option pursuant to Section 10.5, such Managing Member's Interest will be converted into a Non-Managing Member's Interest. In the event of such a conversion, the Managing Member will lose those rights accorded a managing member under this Agreement and will assume the rights of a Non-Managing Member hereunder.

10.5 Option to Sell.

(a) Member Termination Event as to Managing Member. Provided that the Company is not dissolved pursuant to Section 11.1, upon the occurrence of a Member Termination Event as to the Managing Member, the Managing Member or his personal representative or successor in interest, as the case may be, will have the option, but not the obligation, for 90 days after the occurrence of the Member Termination Event, to sell the Managing Member's Interest to the Company, and in such event, the Company will have the obligation to purchase the Managing Member's Interest in accordance with terms of this Section 10.5.

(b) Effective Date. The effective date of the purchase pursuant to this Section 10.5 will be the date on which the option pursuant to this Section 10.5 is exercised (the "Option Date"). Notwithstanding that payment on account of the purchase may be made after the Option Date, the Managing Member will not be considered a Member for any purpose after the Option Date.

(c) Purchase Price. The Purchase Price for the Managing Member's Interest will be the "fair market value" of the Interest as of the Option Date. For purposes of this Section 10.5, the "fair market value" of the Managing Member's Interest will be determined by an appraisal performed by a business valuation expert who is qualified to appraise businesses similar to the Company, and who is selected by agreement between the Managing Member (or his personal representative or successors in interest) and a Majority in Interest of the Non-Managing Members, and will take into account appropriate discounts for lack of marketability, and appropriate premiums applicable to a controlling interest.

(d) Terms. The Purchase Price to be paid upon the sale of the Managing Member's Interest pursuant to this Section 10.5 will be paid in such combination of cash and promissory notes ("Purchase Notes") as a Majority in Interest of the Non-Managing Members may elect, provided that at least 20% of the Purchase Price must be paid in cash at the closing, and any Purchase Note(s) for the balance shall bear interest from the Option Date at the Company's borrowing rate in effect as of the Option Date and shall be payable in equal annual or more frequent installments over no more than five (5) years, and will be prepayable in whole or in part, without penalty.

(e) Closing. The closing of any sale pursuant this Section 10.5 will be held at the offices of the Company within 30 days following the completion of the appraisal. The Company will deliver at the closing the cash portion of the Purchase Price and any Purchase Notes for the balance of the Purchase Price.

ARTICLE 11 DISSOLUTION

11.1 Dissolution. The Company will be dissolved and its affairs will be wound up upon the earliest to occur of the following:

- (a) The sale or other disposition of all or substantially all of the Company's assets and distribution of the proceeds of such sale or disposition;
- (b) The election of the Managing Member to dissolve the Company and terminate its business;
- (c) The occurrence of a Member Termination Event as to the Managing Member, unless a Majority in Interest of the Non-Managing Members elect to continue the Company and appoint a new managing member within 90 days of the relevant event; or
- (d) Any other event which is specified in the Certificate or under applicable law as an event causing the dissolution of the Company.

11.2 Winding Up.

(a) Application of Assets. Upon a dissolution of the Company, the Managing Member will take full account of the Company's liabilities and assets, and the Company's assets will be liquidated as promptly as is consistent with obtaining the fair value thereof. The proceeds from the liquidation of the Company's assets will be applied and distributed in the following order:

- (i) First, to the payment and discharge of all of the Company's debts and liabilities (including debts and liabilities to the Members, to the extent permitted by law), including the establishment of any necessary reserves; and
- (ii) The balance, if any, to the Members having positive balances in their Capital Accounts (after giving effect to all contributions, distributions and allocations for all periods, including the period during which such distribution occurs), in the proportion that the positive balance in each Member's Capital Account bears to the sum of all Capital Accounts having positive balances.

(b) Contributed Assets. Upon the dissolution and liquidation of the Company, any other non-cash assets (including the Patent) that were contributed to the Company by one or more Members and that continue to be owned by the Company as of the time of dissolution, will to the extent possible be distributed in kind upon liquidation of the Company to

the contributing Member(s) at their then book value, in partial satisfaction of each such Member's right to receive distributions under Section 11.2(a)(ii).

(c) Timing. Distributions in liquidation will be made by the end of the taxable year in which the liquidation occurs or, if later, within ninety (90) days of the liquidating event and will otherwise comply with Regulations Section 1.704-1(b).

(d) No Obligation to Restore Deficit. If any Member has a deficit balance in such Member's Capital Account (after taking into account all Capital Account adjustments for the Company's taxable year in which the liquidation occurs), such Member will have no obligation to make any contribution to the capital of the Company with respect to such deficit, and such deficit will not be considered a debt owed to the Company or to any other person for any purpose whatsoever.

ARTICLE 12 INVESTMENT REPRESENTATIONS

Each Non-Managing Member hereby represents, warrants and agrees with the Managing Member and the Company as follows:

12.1 Exemptions. Such Member acknowledges that the Interests are being issued pursuant to exemptions from registration under the Securities Act of 1933 (the "Securities Act") and exemptions from qualification under the securities laws of certain states for transactions not involving any public offering, and that the Company is relying on the representations and warranties included herein in connection with the perfection of such exemptions.

12.2 Financial Means. Such Member has the financial ability to bear the economic risk of this investment (including its possible loss), has adequate means of providing for current needs and contingencies, and has no need for liquidity with respect to this investment.

12.3 Sophistication. Such Member has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of this investment and has obtained, in such Member's judgment, sufficient information from the Company to evaluate the merits and risks of this investment.

12.4 Investment Intent. Such Member is acquiring the Interest for such Member's own account, for investment purposes only, and not with a view to the sale or distribution of any securities in violation of the Securities Act.

12.5 No Advertising. Such Member has not seen, received, been presented with or been solicited by any leaflet, public promotional meeting, newspaper or magazine article or advertisement, radio or television advertisement, or any other form of advertising or general solicitation with respect to the sale of the Interest.

12.6 Information. Such Member has been given the opportunity to ask questions of, and receive answers from, representatives of the Company concerning the terms and conditions of

an investment in the Company and other matters pertaining to the Company, and has received all the information he or she has requested from the Company and considers necessary or appropriate for deciding whether to invest.

12.7 Transfer Restrictions. Such Member understands that the Interests have not been registered under the Securities Act or qualified under the securities laws of any state, and therefore cannot be transferred, resold, pledged, hypothecated, assigned, or otherwise disposed of unless subsequently registered or qualified under such Securities Act and under applicable state securities laws, or an exemption from registration and/or qualification is available. Such Member will not sell or otherwise transfer such securities without registration under the Securities Act or pursuant to an exemption therefrom. In addition, such Member understands that this Agreement imposes substantial additional restrictions on the transferability of the Interests; there is no public market for the Interests; none is expected to develop; and such Member may not be able to liquidate his Interest in the Company.

12.8 Investment Risk. Such Member acknowledges that the Interest is a speculative investment which involves a substantial degree of risk of loss of his entire investment in the Company, that he understands the risk factors related to any purchase of the Interest, that the Company is newly organized and has no financial or operating history, and that any projections for the Company involve numerous assumptions, are inherently uncertain, and should not be used as a substantial basis for determining to acquire the Interest.

12.9 No Representations By Company. Neither the Managing Member nor any officer, agent or employee of the Company, nor any other person has at any time expressly or implicitly represented, guaranteed or warranted to such Member (a) that a percentage of profit and/or amount or type of consideration will be realized as a result of an investment in the Interest, (b) that past performance or experience on the part of any person in any way indicates the predictable results of the ownership of the Interest or of the overall Company business, (c) that any cash distributions from Company operations or otherwise will be made to the Members by any specific date or will be made at all, or (d) that any specific tax benefits will accrue as a result of an investment in the Company.

12.10 Consultation with Attorney. Such Member understands that he has not been represented in this transaction by Howard Rice Nemerovski Canady Falk & Rabkin, A Professional Corporation, which has been counsel to David J. Talaber. Such Member has been advised to consult with his own attorney regarding all legal and other matters concerning an investment in the Company, including the tax consequences of participating in the Company, and has done so, to the extent he considers necessary. Such Member acknowledges that the tax consequences to him of investing in the Company will depend on his particular circumstances, and neither the Company, the Managing Member, nor any other person will be responsible or liable for the tax consequences to him of an investment in the Company. Such Member will look solely to, and rely upon, his own advisers with respect to the legal, financial and tax consequences of this investment.

ARTICLE 13
MISCELLANEOUS PROVISIONS

13.1 Power of Attorney.

(a) Appointment. Each Non-Managing Member, by the execution of this Agreement, irrevocably constitutes and appoints the Managing Member his true and lawful attorney-in-fact with full power and authority in his name, place and stead to execute, acknowledge, deliver, swear to, file and record at the appropriate public offices such documents as may be necessary or appropriate to carry out the provisions of this Agreement, including but not limited to:

(i) All certificates and other instruments (including counterparts of this Agreement), and any amendment thereof, which the Managing Member deems appropriate to form, qualify, or continue the Company as a limited liability company in any jurisdiction in which the Company may conduct business or in which such formation, qualification or continuation is, in the opinion of the Managing Member, necessary or desirable to protect the limited liability of the Members;

(ii) All amendments to this Agreement adopted in accordance with the terms of this Agreement;

(iii) All documents necessary to transfer a Member's Interest in the Company pursuant to the terms hereof; and

(iv) All conveyances and other instruments which the Managing Member deems appropriate to reflect the dissolution and termination of the Company in accordance with the terms hereof.

(b) Effect. This power of attorney is irrevocable, is coupled with an interest, and will survive a Member's bankruptcy, death, adjudication of incompetence, insanity or dissolution.

13.2 Counterparts. This Agreement may be executed in several counterparts, and as executed will constitute one agreement, binding on all of the parties hereto.

13.3 Successors and Assigns. Except as otherwise provided herein, the terms and provisions of this Agreement will be binding upon and will inure to the benefit of the successors and assigns of the parties hereto.

13.4 Notices. All notices required or permitted under this Agreement will be given in writing to the person entitled thereto by personal service, mail, overnight courier or telecopy to the address or telecopy number maintained by the Company for such person. All notices will be effective upon receipt; provided, however, that any notice sent by certified or registered mail to the address so maintained will be deemed received on the earlier of actual receipt or three business days after mailing.

13.5 Benefits. Except as expressly provided herein, this Agreement is entered into for the sole and exclusive benefit of the parties hereto and will not be interpreted in such a manner as to give rise to or create any rights or benefits of or for any person not a party hereto.

13.6 Severability. If any covenant, condition, term or provision of this Agreement is illegal or if the application thereof to any person will to any extent be judicially determined to be invalid or unenforceable, then the remainder of this Agreement, or the application of such covenants, condition, term or provision to persons or in circumstances other than those held invalid or unenforceable, will not be affected thereby, and each covenant, term, condition and provision of this Agreement will be valid and enforceable to the fullest extent permitted by law.

13.7 Complete Agreement. This Agreement and the Certificate constitute the complete agreement between the parties concerning the subject matters in such documents.

13.8 Governing Law. This Agreement will be governed by and interpreted under the laws of the State of Delaware applicable to contracts entered into and performed entirely within the State of Delaware.

13.9 Gender, Number and Headings. As used in this Agreement, the masculine gender will include the feminine and neuter, and vice versa, as the context so requires; and the singular number will include the plural, and vice versa, as the context so requires. As used in this Agreement, section headings are for the convenience of reference only and will not be used to modify, interpret, limit, expand or construe the terms of this Agreement.

13.10 Cross-References. All cross-references in this Agreement, unless specifically directed to another agreement or document or statute, refer to provisions within this Agreement.

13.11 Interpretation. Each Member has had the opportunity to consult counsel in connection with the preparation and negotiation of this Agreement, and this Agreement will be construed according to its fair language. The normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party will not be employed in the interpretation of this Agreement.

13.12 Costs and Expenses of Members. Except as expressly provided otherwise in this Agreement, the Members each will bear their own costs and expenses incurred in connection with their investment in the Company.

13.13 Further Assurances. Each Member will execute such deeds, assignments, endorsements, evidences of transfer and other instruments and documents which will give such further assurances as will be necessary or desirable to perform such Member's obligations hereunder or to effectuate and carry out the business of the Company.

13.14 Dispute Resolution. Any dispute between the parties in connection with or related to this Agreement will be resolved in the following manner:

(a) The parties will meet and attempt to resolve such dispute within ten (10) days.

(b) If the parties are unable to resolve the dispute, the parties will submit the dispute to binding arbitration according to the following rules:

(i) Arbitration will be held in the state in which the Company maintains its principal office, in accordance with the commercial arbitration rules of the American Arbitration Association ("AAA");

(ii) The arbitration will be conducted by a single arbitrator;

(iii) The arbitration will be conducted in an expedited manner, designed to preserve the confidentiality of the dispute;

(iv) The decision of the arbitrator will be final and binding in the absence of manifest fraud; and

(v) Each party to the dispute will share equally the fees and expenses of the arbitrator.

IN WITNESS WHEREOF, this Agreement has been executed as of the date set forth above.

MANAGING MEMBER:

NON-MANAGING MEMBERS:

David J. Talaber

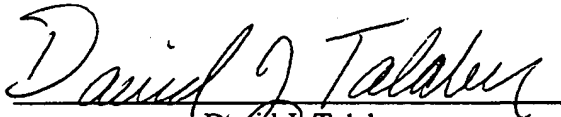
James R. Lloyd, M.D.

Mark Robinson

Mark Schroeder, Esq.

IN WITNESS WHEREOF, this Agreement has been executed as of the date set forth above.

MANAGING MEMBER:



David J. Talaber

NON-MANAGING MEMBERS:

James R. Lloyd, M.D.

Mark Robinson

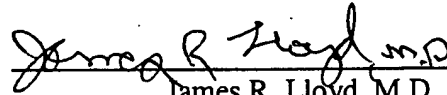
Mark Schroeder, Esq.

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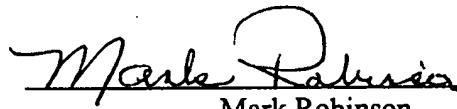
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Mark Robinson

Mark Schroeder, Esq.

IN WITNESS WHEREOF, this Agreement has been executed as of the date set forth above.

MANAGING MEMBER:

David J. Talaber

NON-MANAGING MEMBERS:

James R. Lloyd, M.D.

Mark Robinson

Mark L. Schroeder

Mark Schroeder, Esq.

APPENDIX A
ACANTHA, LLC
MEMBERS', CAPITAL CONTRIBUTIONS AND PERCENTAGE INTERESTS
EFFECTIVE MAY 12, 2002

	PRIOR ADVANCES	CASH CONTRIBUTED AS OF EFFECTIVE DATE	UNFUNDED CAPITAL COMMITMENT	TOTAL CAPITAL CONTRIBUTION	PERCENTAGE INTERESTS
<u>MANAGING MEMBER</u>					
David J. Talaber 5185 Charlotte Way Livermore, CA 94550	\$100,000	0	\$67,000	\$167,000	67%
<u>NON-MANAGING MEMBERS</u>					
James R. Lloyd, M.D. 1080 Circle Drive Elm Grove, WI 53122	\$1,000	\$15,417.91	\$11,000	\$27,417.91	11%
Mark Robinson 1416 Park Place Southlake, TX 76092	\$1,000	\$15,417.91	\$11,000	\$27,417.91	11%
Mark Schroeder, Esq. 201 N. Arlington Heights Rd. Arlington Heights, IL 60004	\$1,000	\$15,417.91	\$11,000	\$27,417.91	11%
<u>TOTAL</u>	<u>\$103,000</u>	<u>\$46,253.73</u>	<u>\$100,000</u>	<u>\$249,253.73</u>	<u>100%</u>

EXHIBIT A
PATENT ASSIGNMENT



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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10/620,154

APPLICANTS:

Talaber et al.

EXAMINER

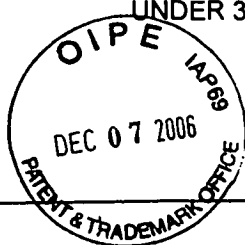
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U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
	A46	591,798	10/1897	Strauss		
	A47	2,017,247	10/1935	Hodge		
	A48	2,376,089	5/45	Savageau		
	A49	2,782,827	2/1957	Rosan		
	A50	3,062,253	11/1962	Millheiser		
	A51	3,561,075	2/1971	Selinko		
	A52	3,896,867	7/1975	Gill et al.		
	A53	4,074,501	2/1978	Sandqvist		
	A54	4,288,902	9/1981	Franz		
	A55	4,380,413	4/1983	Dewey		
	A56	4,640,524	2/1987	Sedlmair		
	A57	4,712,959	12/1987	Hasan		
	A58	4,757,661	7/1988	Hasan		
	A59	5,423,826	6/1995	Coates et al.		
	A60	5,549,612	8/1996	Yapp et al.		
	A61	5,931,838	8/1999	Vito		
	A62	6,258,089	7/2001	Campbell et al.		
	A63	2006/0122602	6/2006	Konieczynski et al.		
	A64	2006/0122603	6/2006	Kolb		
	A65	2006/0122604	6/2006	Gorhan et al.		

FOREIGN PATENT DOCUMENTS

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EXAMINER'S SIGNATURE

DATE CONSIDERED

† EXAMINER:

Initial if reference is considered, whether or not citation is in conformance with MPEP 609.
 Line through citation if not in conformance and not considered.
 Include copy of this form in next communication to applicant.

* If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120. 37 C.F.R. 1.98(d).

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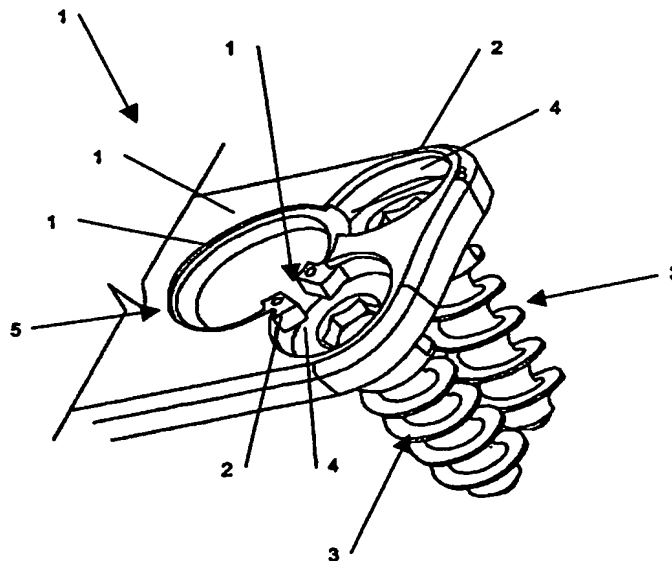
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IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
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[Suite sur la page suivante]

(54) Title: ANTI-SLIP DEVICE FOR AN ORTHOPEDIC IMPLANT

(54) Titre: DISPOSITIF ANTI-RECUL POUR IMPLANT ORTHOPÉDIQUE



(57) Abstract: The anti-slip device comprises at least one housing (6; 7; 9; 11; 13, 14) opening into the bore hole (2) receiving the fixing screw (3) and at least one retaining means (8; 10; 12; 15, 16) which can be elastically deformed under the effect of pressure enabling the screw (3) to pass into and be installed in the bore hole, whereby the retaining means returns to its position of origin and is not deformed when the pressure effect is withdrawn, being positioned above the head (4) of the screw (3) in order to enable the latter to be displaced in relation to the implant (1), parallel to the longitudinal axis of the bore hole.

[Suite sur la page suivante]

WO 00/78238 A1

(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), brevet OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

En ce qui concerne les codes à deux lettres et autres abréviations, se référer aux "Notes explicatives relatives aux codes et abréviations" figurant au début de chaque numéro ordinaire de la Gazette du PCT.

Publiée:

— Avec rapport de recherche internationale.

(57) **Abrégé:** Le dispositif anti-recul comprend au moins un logement (6, 7; 9; 11; 13, 14) qui débouche dans l'alésage (2) recevant la vis de fixation (3) et au moins un moyen de retenue (8; 10; 12; 15, 16) qui est susceptible de se déformer élastiquement sous un effort de pression pour permettre le passage et la mise en place de la vis (3) dans son alésage (2), tandis que le moyen de retenue revient dans une position d'origine, non déformé, lors du retrait de l'effort de pression, pour se positionner au-dessus de la tête (4) de la vis (3) afin d'empêcher cette dernière de se déplacer par rapport à l'implant (1) et parallèlement à l'axe longitudinal de l'alésage.

DISPOSITIF ANTI-RECU POUR IMPLANT ORTHOPEDIQUE

5

10 La présente invention est relative à un dispositif anti-recul destiné à maintenir une vis de fixation dans un alésage préalablement percé dans l'épaisseur de la paroi d'un implant orthopédique.

15 On connaît des dispositifs de ce genre qui sont généralement adaptés à la forme de l'implant orthopédique, comme par exemple, des capots de protection qui viennent se fixer sur l'implant pour empêcher le recul des vis d'une part, et protéger l'environnement extérieur d'autre part.

20 On constate que ce genre de dispositif ne peut pas s'adapter à tous les types d'implants orthopédiques.

25 On connaît également des vis de fixation pour implant orthopédique qui comportent une tête de serrage à bord périphérique segmenté et au milieu de laquelle est percé un logement fileté prévu pour recevoir un bouchon. Ce dernier permet d'écarter le bord périphérique segmenté de la tête de serrage pour qu'elle vienne en appui contre la paroi interne de l'alésage de l'implant pour bloquer la vis de fixation.

30 On remarque que ce type de vis ne peut être utilisé que pour certains implants qui comportent des alésages de diamètre interne suffisant pour recevoir la tête de la vis. En effet, cette dernière présente un diamètre externe de sa tête qui est supérieur à celui des vis généralement utilisées pour la fixation des implants. De plus, ce dispositif de blocage réalisé, par l'intermédiaire d'un bouchon rapporté dans la tête de la vis, empêche toute inclinaison angulaire de la dite vis et tout déplacement de cette dernière par rapport au corps de l'implant.

35 C'est à ces inconvénients qu'entend plus particulièrement remédier la présente invention.

40 Le dispositif anti-recul suivant la présente invention a pour objet d'empêcher ou de limiter uniquement le déplacement suivant une direction parallèle à l'axe longitudinal de l'alésage recevant la vis par rapport au corps de l'implant tout en permettant à cette dernière de pouvoir être ancrée suivant des directions angulaires différentes par rapport à l'axe longitudinal de l'alésage.

45

Le dispositif anti-recul suivant la présente invention est destiné à maintenir une vis de fixation dans un alésage ménagé dans l'épaisseur de la paroi d'un implant orthopédique caractérisé en ce qu'il comprend au moins un logement qui débouche dans l'alésage recevant la vis de fixation et au moins un moyen de retenue qui est susceptible de se déformer élastiquement sous un effort de pression pour permettre le passage et la mise en place de la vis dans son alésage, tandis que le moyen de retenue revient dans une position d'origine, non déformé, lors du retrait de l'effort de pression, pour se positionner au-dessus de la tête de la vis afin d'empêcher cette dernière de se déplacer par rapport à l'implant et parallèlement à l'axe longitudinal de l'alésage.

Le dispositif anti-recul suivant la présente invention comprend, dans un même plan horizontal, un logement qui est formé, d'un trou de faible diamètre débouchant à l'intérieur de l'alésage d'un espace de débattement situé dans le prolongement du trou et un moyen de retenue qui est constitué d'une tige dont une partie est fixée dans le trou de manière que l'autre partie traverse l'alésage et vienne déboucher à l'intérieur de l'espace de débattement pour se déformer élastiquement en flexion sous un effort de pression.

Le dispositif anti-recul suivant la présente invention comprend une tige qui traverse l'alésage de l'implant suivant une direction qui est éloignée du centre C d'intersection des axes XX' et YY'.

Le dispositif anti-recul suivant la présente invention comprend une tige, un trou et un espace qui sont disposés dans un même plan horizontal qui est perpendiculaire à l'axe longitudinal de l'alésage.

Le dispositif anti-recul suivant la présente invention comprend, dans un même plan horizontal, un logement qui est formé d'une rainure circulaire ménagée coaxialement à l'intérieur de l'alésage de l'implant et un moyen de retenue qui est constitué d'une rondelle ouverte disposée dans ladite rainure.

Le dispositif anti-recul suivant la présente invention comprend une rondelle ouverte qui présente un diamètre extérieur, non déformé, qui est inférieur à celui de la rainure circulaire, mais supérieur à celui de l'alésage de l'implant.

Le dispositif anti-recul suivant la présente invention comprend, dans un même plan horizontal, un logement qui est formé d'un espace dont les bords opposés sont inclinés pour présenter un profil en forme de V et un moyen de retenue qui est constitué d'une tige de même profil introduite dans l'espace en forme de V pour se déformer élastiquement en flexion sous un effort de pression.

Le dispositif anti-recul suivant la présente invention comprend un espace qui est disposé de manière à être centré autour du point d'intersection C des axes principaux XX' et YY' de l'alésage.

Le dispositif anti-recul suivant la présente invention comprend une tige qui est disposée à l'intérieur de l'espace de manière que, de part et d'autre du centre C, l'alésage soit traversé par les branches inclinées de ladite tige.

- 5 Le dispositif anti-recul suivant la présente invention comprend, dans un même plan horizontal, un logement qui est formé de deux trous parallèles débouchant à l'intérieur de l'alésage de l'implant et un moyen de retenue qui est constitué de deux tiges coopérant respectivement avec les trous pour se déformer élastiquement en flexion sous un effort de pression.

10

Le dispositif anti-recul suivant la présente invention comprend des trous qui sont prévus pour traverser l'alésage, de chaque côté du centre C, et suivant une direction parallèle à celle de l'axe YY'.

15

Le dispositif anti-recul suivant la présente invention comprend des trous qui sont prévus pour traverser l'alésage, de chaque côté du centre C et suivant une direction parallèle à celle de l'axe XX'.

20

La description qui va suivre en regard des dessins annexés, donnés à titre d'exemples non limitatifs, permettra de mieux comprendre l'invention, les caractéristiques qu'elle présente et les avantages qu'elle est susceptible de procurer :

25

Figures 1 et 2 sont des vues de dessus illustrant un alésage d'un implant orthopédique comportant un dispositif anti-recul constitué d'une tige élastique unilatérale.

30

Figures 3 et 4 sont des vues représentant une première et seconde variante du dispositif anti-recul qui est constitué d'une rondelle élastique ouverte.

Figure 5 est une vue semblable à celle de figure 1, mais montrant une troisième variante du dispositif anti-recul qui est constitué d'une tige élastique en forme de V.

35

Figures 6 et 7 sont des vues représentant une quatrième et cinquième variante du dispositif anti-recul qui est constitué de tiges élastiques bilatérales.

40

On a montré en figures 1 et 2 une partie d'un implant orthopédique 1, et plus particulièrement une portion de sa paroi dans laquelle est percé un alésage 2 prévu pour recevoir une vis 3 permettant la fixation de l'implant contre l'os d'un patient.

45

La vis de fixation 3 est prévue pour traverser l'alésage 2 de manière que sa tête de serrage 4 vienne se loger dans une partie de l'alésage destiné à cet effet. La vis de fixation 3 peut être positionnée à l'intérieur de l'alésage 2 suivant des directions angulaires précises par rapport à l'axe longitudinal dudit alésage pour venir s'ancrer dans la partie de l'os la plus résistante.

L'implant orthopédique 1 comporte au-dessus de la tête de serrage 4 de la vis de fixation 3 un dispositif anti-recul 5 empêchant à ladite vis, ancrée dans l'os, de se déplacer en translation par rapport à l'implant, et plus particulièrement suivant une direction parallèle à l'axe longitudinal de l'alésage 2.

5

Le dispositif anti-recul 5 comprend un logement qui est constitué, dans un même plan horizontal, d'un trou ou logement 6 de faible diamètre débouchant à l'intérieur de l'alésage 2 et d'un espace de débattement 7 situé dans le prolongement du trou 6.

10

Le trou ou logement 6 et l'espace 7 sont prévus sur le côté de l'alésage 2, c'est à dire qu'ils sont décalés par rapport au centre d'intersection des axes principaux XX' et YY' dudit alésage.

15

En effet, dans notre exemple de réalisation, l'alésage 2 est porté par les deux axes principaux XX' et YY' et un troisième axe dit « axe longitudinal » qui est perpendiculaire aux deux autres, ou perpendiculaire à un plan horizontal délimité par la surface circulaire de l'alésage.

20

Le dispositif anti-recul 5 comprend à l'intérieur du logement 6, 7 un moyen de retenue qui est constitué d'une tige 8 susceptible de se déformer élastiquement en flexion sous un effort de pression.

25

La tige 8 comporte une partie qui est fixée dans le trou ou logement 6 de manière que l'autre partie traverse l'alésage 2 et vienne déboucher à l'intérieur de l'espace de débattement 7.

30

La tige 8, le trou 6 et l'espace 7 du dispositif anti-recul 5 sont disposés dans un même plan horizontal qui est perpendiculaire à l'axe longitudinal de l'alésage 2.

35

La tige 8 traverse l'alésage 2 de l'implant 1 suivant une direction qui est éloignée du centre d'intersection des axes XX', YY', mais parallèle à l'axe YY', et contenue dans l'espace délimité par la surface circulaire dudit alésage.

40

En outre, la tige 8 traverse l'alésage 2 à l'intérieur de sa surface circulaire, mais en bordure de cette dernière.

45

Lors de l'introduction de la vis de fixation 3 à l'intérieur de l'alésage 2, et de son ancrage dans l'os suivant une direction angulaire déterminée, l'effort de pression soumis à la tige 8 par la tête de serrage 4 déforme en flexion ladite tige à l'intérieur de l'espace de débattement 7 pour laisser le passage à ladite vis.

50

On note, lorsque la vis 3 est complètement introduite dans l'alésage 2 ou ancrée dans l'os du patient, que la tige 8, du fait de son élasticité et du retrait de l'effort de pression, reprend sa position d'origine, non déformée, au-dessus de la tête de serrage 4 pour empêcher ladite vis de se déplacer par rapport à l'implant 1

suivant une direction sensiblement parallèle à celle de l'axe longitudinal de l'alésage.

5 On a représenté en figure 3 une première variante du dispositif anti-recul 5 suivant la présente invention.

10 Le dispositif anti-recul 5 comprend un logement qui est constitué d'une rainure circulaire 9 ménagée à l'intérieur de l'alésage 2 de l'implant 1 et coaxialement à ce dernier, c'est à dire que la rainure circulaire 9 est centrée autour du point d'intersection des axes principaux XX' et YY'.

15 Le dispositif anti-recul 5 comprend à l'intérieur du logement 9 un moyen de retenue qui est constitué d'une rondelle ouverte 10 susceptible de se déformer élastiquement sous un effort de pression.

La rondelle ouverte 10 présente un diamètre extérieur, non déformé, qui est inférieur à celui de la rainure circulaire 9, mais supérieur à celui de l'alésage 2 de l'implant 1.

20 Lors de l'introduction de la vis de fixation 3 à l'intérieur de l'alésage 2, et de son ancrage dans l'os suivant une direction angulaire déterminée, l'effort de pression soumis à la rondelle ouverte 10 par la tête de serrage 4 déforme cette dernière à l'intérieur de la rainure circulaire 9 pour laisser le passage à ladite vis.

25 On note, lorsque la vis 3 est complètement introduite dans l'alésage 2 ou ancrée dans l'os du patient, que la rondelle ouverte 10, du fait de son élasticité et du retrait de l'effort de pression, reprend sa position d'origine, non déformée, au-dessus de la tête de serrage 4 pour empêcher ladite vis de se déplacer par rapport à l'implant 1 suivant une direction sensiblement parallèle à celle de l'axe longitudinal de l'alésage 2.

On a montré en figure 4 une seconde variante du dispositif anti-recul 5 suivant la présente invention.

35 L'implant orthopédique 1 est percé de deux alésages 2 prévus pour recevoir chacun une vis de fixation.

40 La partie de l'alésage 2 recevant la tête 4 de chaque vis de fixation 3 débouche dans un logement circulaire 17 qui est décalé axialement par rapport aux alésages 2 et qui est susceptible de recevoir une rondelle ouverte 10 afin de constituer le dispositif anti-recul 5. On constate que la rondelle ouverte 10 traverse partiellement chaque alésage 2 pour venir au-dessus de la tête 4 de chaque vis 3 après introduction.

45 La rondelle ouverte 10 est disposée de manière que son ouverture 18 soit placée au-dessus de l'alésage 2 lors de l'introduction de la vis 3, afin que ladite rondelle puisse se déformer élastiquement sous l'effort de pression de ladite vis.

Ainsi, la rondelle ouverte 10 du dispositif anti-recul 5 permet de retenir deux vis de fixation 3, du fait de sa position axiale par rapport aux alésages 2.

5 On a montré en figure 5 une troisième variante du dispositif anti-recul 5 suivant la présente invention.

10 Le dispositif anti-recul 5 comprend un logement qui est constitué d'un espace 11 dont les bords opposés sont inclinés pour présenter un profil en forme de V disposé dans un plan horizontal qui est perpendiculaire à l'axe longitudinal de l'alésage 2 de l'implant orthopédique 1.

L'espace 11 est disposé de manière à être centré autour du point d'intersection des axes principaux XX' et YY' de l'alésage 2.

15 Le dispositif anti-recul 5 comprend à l'intérieur du logement 11 un moyen de retenue qui est constitué d'une tige 12 en forme de V susceptible de se déformer élastiquement en flexion sous un effort de pression.

20 La tige 12 est disposée à l'intérieur de l'espace 11 de manière que, de part et d'autre du centre d'insertion des axes XX' et YY', l'alésage 2 soit traversé par les branches inclinées de ladite tige.

25 Lors de l'introduction de la vis de fixation 3 à l'intérieur de l'alésage 2, et de son ancrage dans l'os suivant une direction angulaire déterminée, l'effort de pression soumis à la tige 12 par la tête de serrage 4 déforme cette dernière, et plus particulièrement chacune de ses branches inclinées à l'intérieur de l'espace 11 pour laisser le passage à ladite vis.

30 On note, lorsque la vis 3 est complètement introduite dans l'alésage 2 ou ancrée dans l'os du patient, que la tige 12, du fait de son élasticité et du retrait de l'effort de pression, reprend sa position d'origine, non déformée, au-dessus de la tête de serrage 4 pour empêcher ladite vis de se déplacer par rapport à l'implant 1 suivant une direction sensiblement parallèle à celle de l'axe longitudinal de l'alésage 2.

35 On a montré en figure 6 une quatrième variante du dispositif anti-recul 5 suivant la présente invention.

40 Le dispositif anti-recul 5 comprend dans un même plan horizontal un logement qui est constitué de deux trous parallèles 13 et 14 débouchant à l'intérieur de l'alésage 2 de l'implant orthopédique 1.

45 Les trous 13, 14 sont prévus pour traverser l'alésage 2 de chaque côté du centre d'insertion des axes XX' et YY', et suivant une direction parallèle à celle de l'axe YY'.

Le dispositif anti-recul 5 comprend à l'intérieur de chaque trou 13, 14 un moyen de retenue qui est constitué d'une tige 15, 16 susceptible de se déformer élastiquement en flexion sous un effort de pression.

- 5 Les tiges 15, 16 sont disposées respectivement à l'intérieur des trous 13, 14 de manière à traverser l'alésage 2 de l'implant 1.

- 10 Les tiges 15, 16, et les trous 13, 14 du dispositif anti-recul 5 sont disposés dans un même plan horizontal qui est perpendiculaire à l'axe longitudinal de l'alésage 2.

- 15 Les tiges 15, 16 traversent l'alésage 2 de l'implant 1 suivant une direction qui est éloignée du centre d'insertion des axes XX' et YY', mais parallèle à l'axe YY' et contenue dans l'espace délimité par la surface circulaire dudit alésage.

En outre, les tiges 15, 16 traversent l'alésage 2 à l'intérieur de sa surface circulaire, mais en bordure de cette dernière.

- 20 Lors de l'introduction de la vis de fixation 3 à l'intérieur de l'alésage 2, et de son ancrage dans l'os suivant une direction angulaire déterminée, l'effort de pression soumis aux tiges 15, 16 par la tête de serrage 4 déforme ces dernières en flexion, entraînant un faible déplacement desdites tiges à l'intérieur des trous 13, 14 pour laisser le passage à ladite vis.

- 25 On note, lorsque la vis 3 est complètement introduite dans l'alésage 2 ou ancrée dans l'os du patient, que les tiges 15, 16, du fait de leur élasticité et du retrait de l'effort de pression, reprennent leur position d'origine, non déformée, au-dessus de la tête de serrage 4 pour empêcher ladite vis de se déplacer par rapport à l'implant 1 suivant une direction sensiblement parallèle à celle de l'axe longitudinal de l'alésage 2.

- 35 On a montré en figure 7 une cinquième variante du dispositif anti-recul 5 suivant la présente invention qui consiste principalement à disposer les trous 13, 14 et les tiges 15, 16 représentés en figure 6 dans une direction qui est parallèle à l'axe XX' de l'alésage 2.

En outre les mêmes tiges 15, 16 peuvent être utilisées pour plusieurs alésages 2 afin de retenir différentes vis de fixation 3 (figure 7).

- 40 Il doit d'ailleurs être entendu que la description qui précède n'a été donnée qu'à titre d'exemple et quelle ne limite nullement le domaine de l'invention dont on ne sortirait pas en remplaçant les détails d'exécution décrits par tout autre équivalent.

REVENDEICATIONS

- 5 1. Dispositif anti-recul destiné à maintenir une vis de fixation (3) dans un alésage (2) ménagé dans l'épaisseur de la paroi d'un implant orthopédique (1) caractérisé en ce qu'il comprend au moins un logement (6, 7 ; 17 ; 11 ; 13,14) qui débouche dans l'alésage (2) recevant la vis de fixation (3) et au moins un moyen de retenue (8 ; 10 ; 12 ; 15, 16) qui est décalé axialement par rapport aux axes principaux XX' et YY' de l'alésage (2) pour pouvoir se déformer élastiquement sous un effort de pression afin de permettre le passage et la mise en place de la vis (3) dans son alésage (2), tandis que le moyen de retenue revient dans une position d'origine, non déformé, lors du retrait de l'effort de pression, pour se positionner au-dessus de la tête (4) de la vis (3) afin d'empêcher cette dernière de se déplacer par rapport à l'implant (1) suivant une direction parallèle à l'axe longitudinal de l'alésage.
- 10
- 15
- 20 2. Dispositif anti-recul suivant la revendication 1, caractérisé en qu'il comprend, dans un même plan horizontal, un logement qui est formé, d'un trou (6) de faible diamètre débouchant à l'intérieur de l'alésage (2) d'un espace de débattement (7) situé dans le prolongement du trou (6) et un moyen de retenue qui est constitué d'une tige (8) dont une partie est fixée dans le trou (6) de manière que l'autre partie traverse l'alésage (2) et vienne déboucher à l'intérieur de l'espace de débattement (7) pour se déformer élastiquement en flexion sous un effort de pression.
- 25
- 30 3. Dispositif anti-recul suivant la revendication 2, caractérisé en ce que la tige (8) traverse l'alésage (2) de l'implant (1) suivant une direction qui est éloignée du point d'intersection des axes XX' et YY'.
- 35 4. Dispositif anti-recul suivant la revendication 2, caractérisé en ce que la tige (8), le trou (6) et l'espace (7) sont disposés dans un même plan horizontal qui est perpendiculaire à l'axe longitudinal de l'alésage (2).
- 40 5. Dispositif anti-recul suivant la revendication 1, caractérisé en ce qu'il comprend, dans un même plan horizontal, un logement qui est formé d'une rainure circulaire (17) décalée axialement par rapport à l'alésage (2) pour traverser partiellement ce dernier, et un moyen de retenue qui est constitué d'une rondelle ouverte (10) disposée dans ladite rainure.
- 45 6. Dispositif anti-recul suivant la revendication 5, caractérisé en ce que la position du logement circulaire (17) par rapport aux alésages (2) est décalée axialement pour traverser partiellement ces derniers, et permettre à la rondelle ouverte (10) de retenir au moins deux vis (3) préalablement introduites dans chaque alésage.

- 5 7. Dispositif anti-recul suivant la revendication 6, **caractérisé en ce que** la rondelle ouverte (10) est disposée dans le logement (17) de manière que son ouverture (18) soit placée au-dessus de l'un des alésages (2) pour pouvoir se déformer élastiquement.
- 10 8. Dispositif anti-recul suivant la revendication 1, **caractérisé en ce qu'il** comprend, dans un même plan horizontal, un logement qui est formé d'un espace (11) dont les bords opposés sont inclinés pour présenter un profil en forme de V et un moyen de retenue qui est constitué d'une tige (12) de même profil introduite dans l'espace (11) en forme de V pour se déformer élastiquement en flexion sous un effort de pression.
- 15 9. Dispositif anti-recul suivant la revendication 8, **caractérisé en ce que** la tige (12) est disposée à l'intérieur de l'espace (11) de manière que, de part et d'autre du point d'insertion des axes XX' et YY', l'alésage (2) soit traversé par les branches inclinées de ladite tige.
- 20 10. Dispositif anti-recul suivant la revendication 1, **caractérisé en ce qu'il** comprend, dans un même plan horizontal, un logement qui est formé de deux trous parallèles (13, 14) débouchant à l'intérieur de l'alésage (2) de l'implant (1) et un moyen de retenue qui est constitué de deux tiges (15, 16) coopérant respectivement avec les trous (13, 14) pour se déformer élastiquement en flexion sous un effort de pression.
- 25 11. Dispositif anti-recul suivant la revendication 10, **caractérisé en ce que** les trous (13, 14) sont prévus pour traverser l'alésage (2) de chaque côté du point d'intersection des axes principaux XX' et YY' et suivant une direction parallèle à celle de l'axe YY'.
- 30 12. Dispositif anti-recul suivant la revendication 10, **caractérisé en ce que** les trous (13, 14) sont prévus pour traverser l'alésage (2) de chaque côté du point d'intersection des axes principaux XX' et YY' et suivant une direction parallèle à celle de l'axe XX'.
- 35

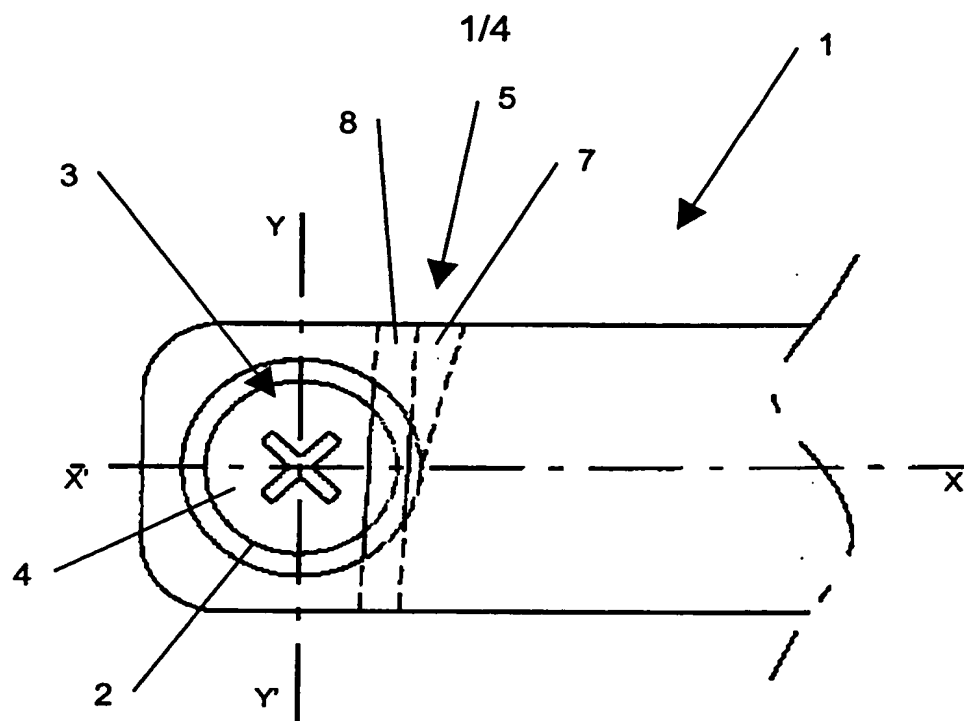


FIGURE 1

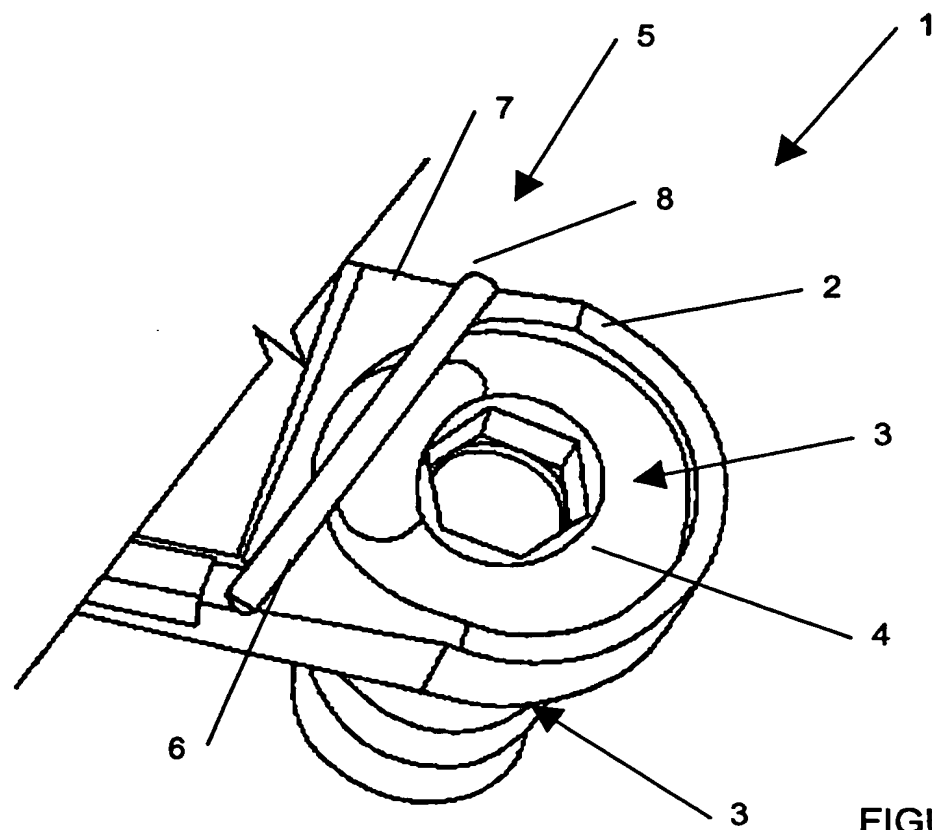


FIGURE 2

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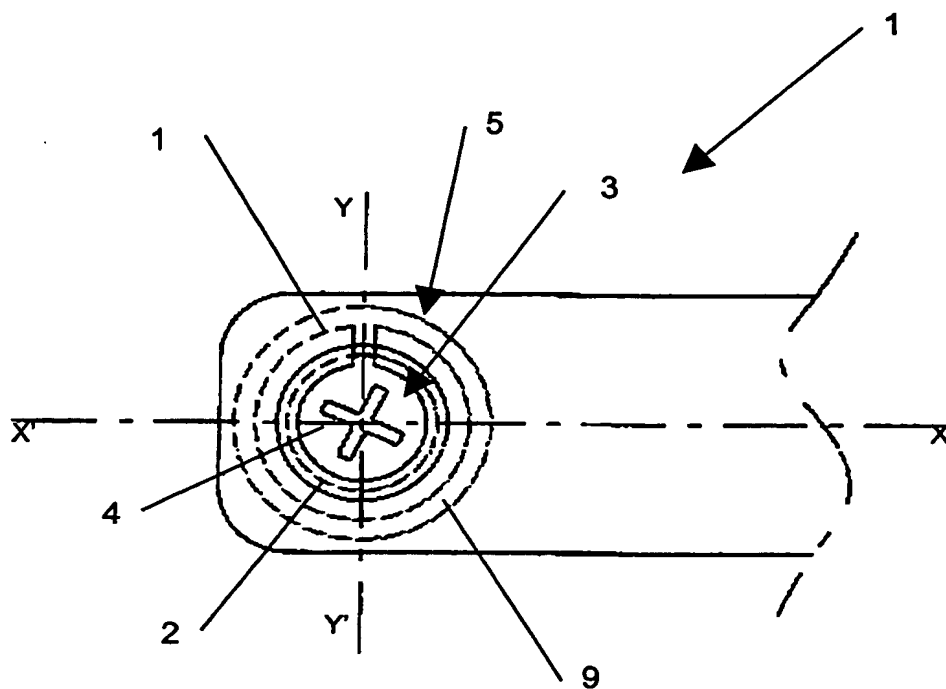


FIGURE 3

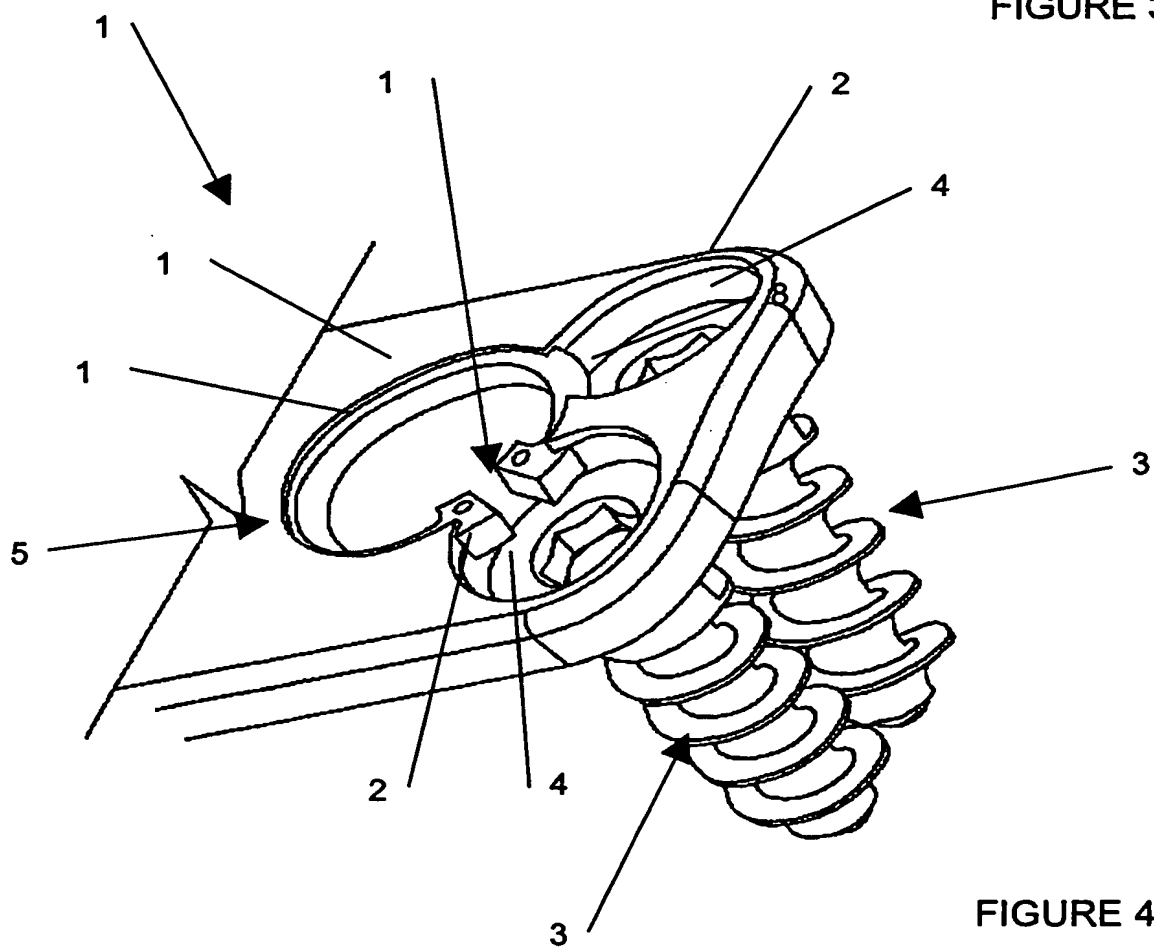


FIGURE 4

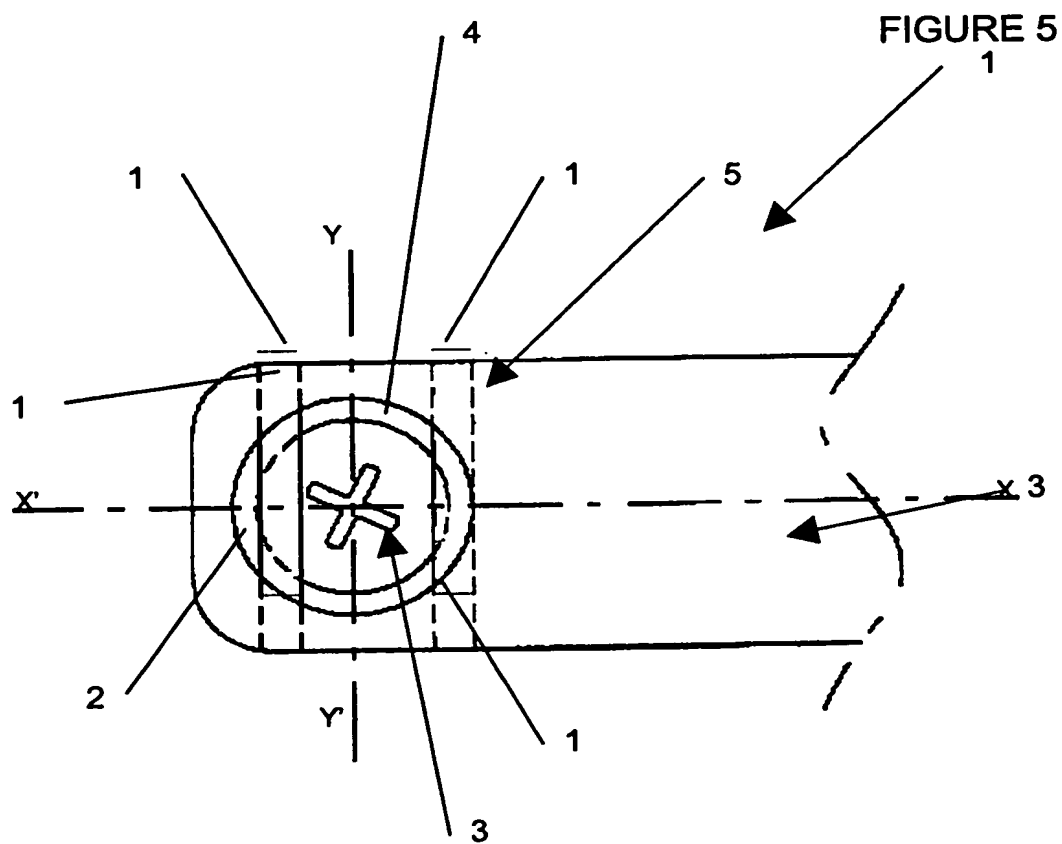
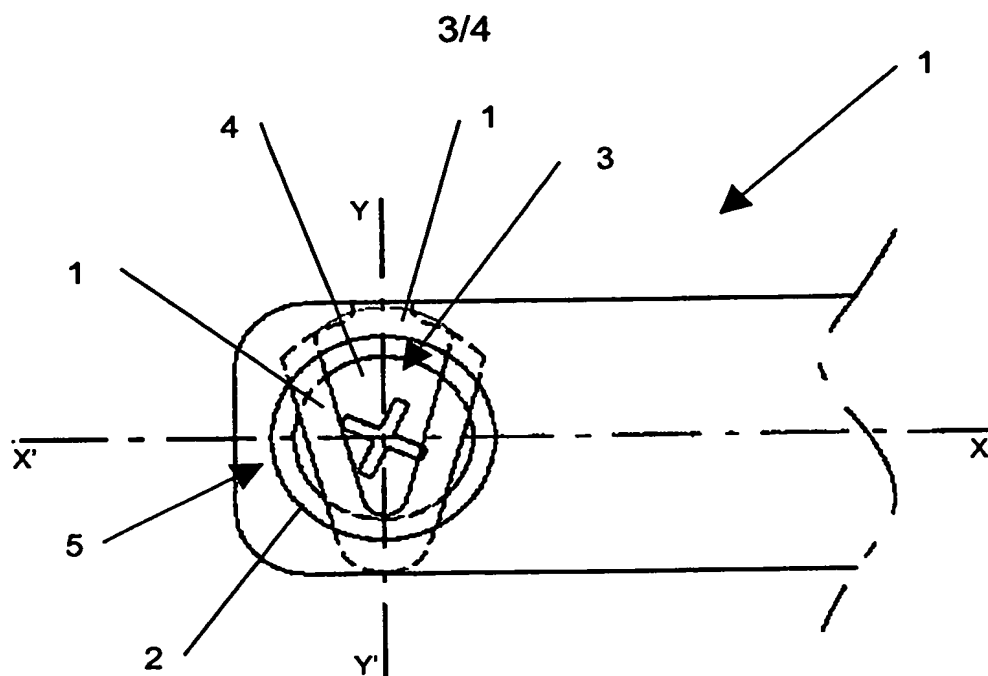


FIGURE 6

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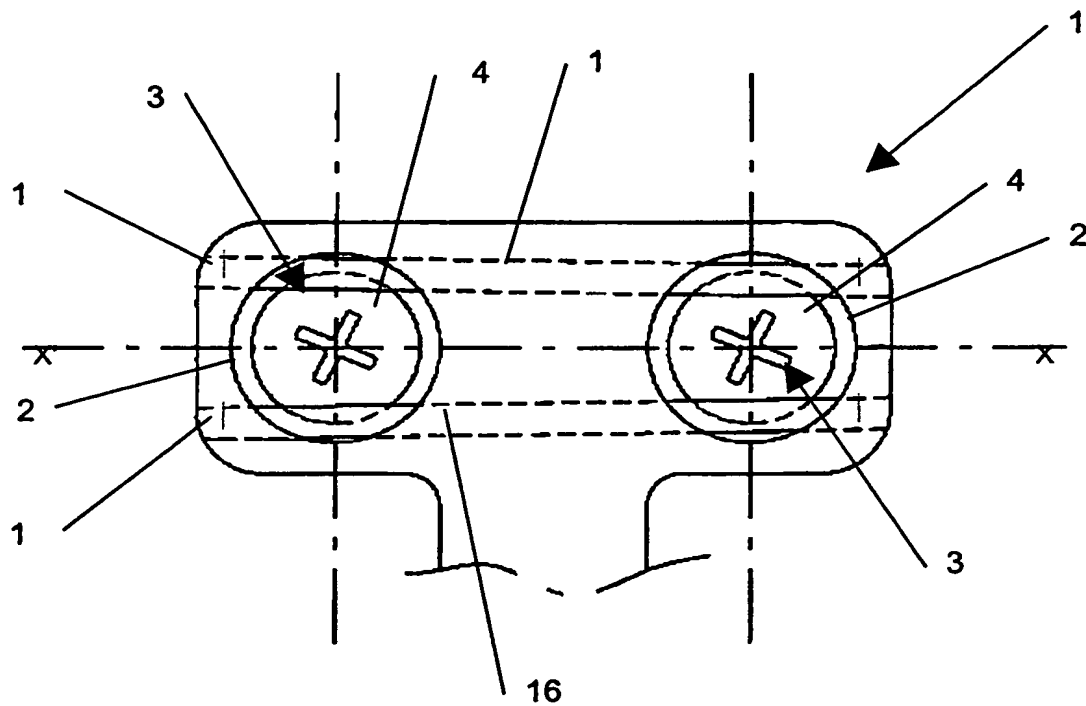


FIGURE 7

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/FR 00/01596

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B17/80

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 876 402 A (J.P.ERRICO ET AL.) 2 March 1999 (1999-03-02) column 6, line 1 - line 11; figures 3B,6 column 7, line 41 - line 55	1
A	US 5 879 389 A (T.KOSHINO) 9 March 1999 (1999-03-09) column 12, line 25 - column 13, line 23; figures 5,6	1
A	DE 44 09 833 A (BIEDERMANN MOTECH) 5 October 1995 (1995-10-05) abstract; figures 3,4 column 2, line 16 - line 22	1
-/-		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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Date of the actual completion of the international search

27 September 2000

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04/10/2000

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INTERNATIONAL SEARCH REPORT

Internat Application No

PCT/FR 00/01596

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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RAPPORT DE RECHERCHE INTERNATIONALE

Données internationales

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B. DOMAINES SUR LESQUELS LA RECHERCHE A PORTE

Documentation minimale consultée (système de classification suivi des symboles de classement)

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Base de données électronique consultée au cours de la recherche internationale (nom de la base de données, et si réalisable, termes de recherche utilisés)

C. DOCUMENTS CONSIDERES COMME PERTINENTS

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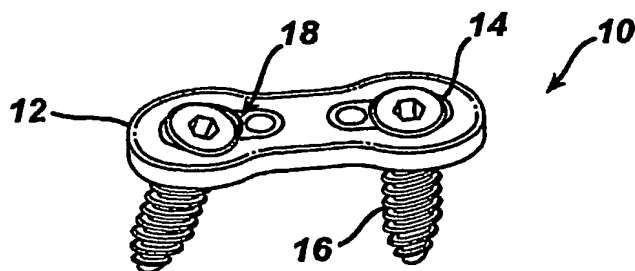
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(54) Title: SPINAL PLATE SYSTEM AND METHOD OF USE



(57) Abstract: A bone plate system is provided in which the system comprises an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, a maximum plate width, a minimum plate width, and a plurality of apertures extending from the first surface through to the second surface for receiving bone screws. The system additionally includes a plurality of bone screws capable of insertion into bone, each screw having a major screw diameter and a minor screw diameter. The dimensions of the bone plate and bone screws being such that the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7.

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SPINAL PLATE SYSTEM AND METHOD OF USE

FIELD

5 The present invention relates to fixation devices used in orthopaedic and spinal surgery and particularly to bone fixation plates useful for positioning and immobilizing bone segments.

BACKGROUND

10 For a number of known reasons, bone fixation devices are useful for promoting proper healing of injured or damaged vertebral bone segments caused by trauma, tumor growth, or degenerative disc disease. The fixation devices immobilize the injured bone segments to ensure the proper growth of new osseous tissue between the damaged segments. These types of bone fixation devices often include internal bracing and
15 instrumentation to stabilize the spinal column to facilitate the efficient healing of the damaged area without deformity or instability, while minimizing any immobilization and post-operative care of the patient.

 One such device is an osteosynthesis plate, more commonly referred to as a bone fixation plate, that can be used to immobilize adjacent skeletal parts such as bones.
20 Typically, the fixation plate is a rigid metal or polymeric plate positioned to span bones or bone segments that require immobilization with respect to one another. The plate is fastened to the respective bones, usually with bone screws, so that the plate remains in contact with the bones and fixes them in a desired position. Bone plates can be useful in providing the mechanical support necessary to keep vertebral bodies in proper position
25 and bridge a weakened or diseased area such as when a disc, vertebral body or fragment has been removed.

 Such plates have been used to immobilize a variety of bones, including vertebral bodies of the spine. These bone plate systems usually include a rigid bone plate having a plurality of screw openings. The openings are either holes or slots to allow for
30 freedom of screw movement. The bone plate is placed against the damaged vertebral

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bodies and bone screws are used to secure the bone plate to the spine, usually with the bone screws being driven into the vertebral bodies. Exemplary systems are described in U.S. Patent Nos. 6,159,213 to Rogozinski; 6,017,345 to Richelsoph; 5,676,666 to
5 Oxland et al.; 5,616,144 to Yapp et al.; 5,549,612 to Yapp et al.; 5,261,910 to Warden et al.; and 4,696,290 to Steffee.

Despite the existence of these bone plate systems, there remains a need for a bone plate system that can be implanted with a minimum number of steps and with minimal tissue retraction, tissue dissection, and damage.

10

SUMMARY

Disclosed herein are bone plate systems comprising a bone plate and bone screws having unique geometry and dimensions that minimize the width of the plate. In one aspect, the bone plate has a width that is less than that of conventional bone plates, and the bone screws used with the plate have a larger major diameter than conventional
15 bone screws. Combined, these features facilitate bone plate fixation with minimal damage to soft tissue and bone, and also allow implantation of the bone plate system with fewer steps.

The narrow width of the bone plate is advantageous as it reduces trauma to soft tissue by requiring minimal tissue retraction and dissection for implantation. As a result, patients suffer less discomfort and can recover more quickly. In addition, the large diameter of the bone screws provide enhanced fixation such that fewer bone screws are required. For example, in one embodiment, it is possible to implant the plate using only one bone screw per vertebral body. Compared with conventional bone plates, the
20 present system can thus reduce the magnitude of osseous tissue damage incurred by bone structures due to bone screws. As a further advantage, the number of steps required to implant the bone plate system is reduced because the number of screws a surgeon must implant is reduced.

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5 In one embodiment, the bone plate system comprises an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, a maximum plate width, and a plurality of apertures extending through the plate from the first surface to the second surface. The system also includes a plurality of bone screws matable within the apertures for insertion into bone, each screw having a major screw diameter. The dimensions of the bone plate and bone screws are such that, in an exemplary embodiment, the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7.

10 In one aspect, the bone plate system includes additional features such as a locking mechanism for preventing bone screw backout. The bone plate can also include bone-engaging protrusions extending from at least one surface of the plate to provide enhanced rotational and torsional stability. These protrusions can extend from a side edge of the bone plate.

15 In another aspect, the apertures in the bone plate are aligned along a longitudinal axis of the bone plate. In this embodiment, each aperture is adapted to be positioned adjacent a different vertebral body.

In another embodiment, a bone plate has a first surface and an opposed second, bone-contacting surface, and a plurality of apertures extending through the bone plate from the first surface to the second surface, such that each of the plurality of apertures is adapted to receive a bone screw and is aligned with a longitudinal axis of the bone plate. The bone plate further includes an integrated retaining member to inhibit backout of a screw from the apertures. Moreover, the bone plate has a width that varies along the longitudinal axis including a maximum width and a minimum width, wherein the ratio of the maximum width to a minimum diameter of the apertures, measured in a direction transverse to the longitudinal axis, is less than or equal to approximately 2.5.

20 In a further embodiment, the bone plate system includes a bone plate having a superior end, a central portion, an inferior end, a first surface, and a second, bone-contacting surface opposed to the first surface. The bone plate includes a plurality of apertures extending therethrough from the first surface to the second surface. The system

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also includes a plurality of bone screws implantable within the apertures for insertion into bone, each screw having a major screw diameter. The bone plate also includes a width which may vary along a portion of its length.

5 In yet another aspect, the bone plate system includes a bone plate having a first surface and a second bone-contacting surface opposed to the first surface, and a plurality of apertures extending from the first surface to the second surface for receiving bone screws. The apertures can be positioned along a longitudinal axis of the bone plate and spaced such that each aperture is adapted for placement adjacent to a different vertebral
10 body. The bone plate can have an elongate shape with a width that varies along the longitudinal axis of the bone plate, wherein a maximum width is less than or equal to approximately 10.5 mm. The system also includes a plurality of bone screws capable of insertion through an aperture into bone, wherein each screw has a major screw diameter of at least approximately 4.6 mm.

15 In an additional aspect, the bone plate can include a portion with a greater width than other portions of the bone plate. The portion of greater width may have two apertures oriented transverse to a longitudinal axis of the bone plate and adapted for placement adjacent the same vertebral body. In one embodiment, the bone plate also includes at least one additional aperture at a portion of the plate having a lesser width
20 and the ratio of the bone plate width at the portion of the plate having a lesser width, measured across the at least one additional aperture, to the major bone screw diameter is equal to or less than approximately 2.5.

 In yet another aspect, the bone plate includes a portion having a wider width at one end of the bone plate. The wider end of the plate preferably includes multiple
25 apertures arranged across the wider width, the multiple apertures being oriented transverse to a longitudinal axis of the plate and each aperture being adapted for placement adjacent to the same vertebral body. The end of the plate having a lesser width preferably includes at least one aperture, each aperture in the end having a lesser width is aligned with the longitudinal axis of the plate and is adapted for placement
30 adjacent to a different vertebral body. In one embodiment, the ratio of the plate width as

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measured across an aperture in the narrow end to the major screw diameter is less than approximately 2.7.

5 The present invention also encompasses methods of implanting a bone plate system. In one embodiment, the method includes providing an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, a maximum plate width, a minimum plate width, and a plurality of apertures extending therethrough from the first to the second surface for receiving bone screws. A plurality of bone screws are also provided, each screw having a major screw diameter and a
10 minor screw diameter, wherein the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7. The method further includes the steps of creating at least one incision to provide access to a site on or adjacent to a patient's spinal column, inserting the bone plate through the at least one incision, and placing the bone plate at a desired location spanning at least two vertebral bodies. The
15 bone screws are then inserted through the at least one incision and through an aperture in the bone plate. In one exemplary technique, each bone screw is implanted in a different vertebral body.

BRIEF DESCRIPTION OF THE DRAWINGS

20 The invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of an exemplary embodiment of the present bone plate system including a bone plate and bone screws;

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FIG. 2A is a top view of another embodiment of an exemplary bone plate;

FIG. 2B is a side view of the bone plate of FIG. 2A;

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FIG. 2C is an end view of the bone plate of FIG. 2A;

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FIG. 2D is a side view of an alternative embodiment of a bone plate;

FIG. 2E is a sectional view of the plate shown in FIG. 2D along lines 2E-2E;

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FIG. 3A is a perspective view of one embodiment of a bone screw useful with the present bone plate system;

FIG. 3B is a side sectional view of the bone screw of FIG. 3A;

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FIG. 4A is a top view of another embodiment of an exemplary bone plate;

FIG. 4B is a side view of the bone plate of FIG. 4A;

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FIG. 5 is a top view of another embodiment of an exemplary bone plate;

FIG. 6 is a top view of a further embodiment of an exemplary bone plate;

FIG. 7 is a top view of an additional embodiment of an exemplary bone plate;

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FIG. 8A is a perspective view of a bone plate with bone-engaging spikes;

FIG. 8B is a side view of the bone plate of FIG. 8A along lines 8B-8B of FIG.

8A;

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FIG. 9A is a top view of yet another embodiment of a bone plate with bone-engaging spikes;

FIG. 9B is an end view of the bone plate of FIG. 9A;

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FIG. 10A is a partial view of an exemplary locking mechanism for a bone plate, illustrating the locking mechanism in an unlocked position;

5 FIG. 10B is a view of the locking mechanism of FIG. 10A after rotating the locking mechanism into a locked position; and

10 FIG. 11 is a perspective view of an implanted bone plate system on a patient's spinal column, illustrating the plate attached to the anterior surfaces of adjacent vertebrae of the cervical spine.

DETAILED DESCRIPTION

15 In general, disclosed herein are spinal fixation plates having at least two apertures for receiving a bone screw. The plate may be adapted to be attached to adjacent vertebrae to maintain the vertebrae in a fixed position and thereby provide biomechanical stability to the vertebrae. The shape and structure of the bone plate system facilitate its use in a variety of surgical procedures, including minimally invasive surgical procedures. In one aspect, the plate has a width that is narrower than conventionally used bone plates, permitting the use of a smaller incision. In addition, 20 the bone screws used with the plate system have a larger major diameter than conventional bone screws. As a result, fewer bone screws are needed to affix the plate to bone, and it is possible to use only a single bone screw for each vertebral body to which the plate is to be affixed, thus reducing the time and number of steps required by a surgeon to implant the plate.

25 The following exemplary embodiments are described herein with reference to bone plates used to span and immobilize adjacent vertebral bodies in spinal fixation techniques. However, it is understood that the bone plate systems described herein may be applicable to the fixation of any type of adjacent bones or bone segments.

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FIG. 1 illustrates one embodiment of the bone plate system 10, which includes a bone plate 12 having apertures 14 adapted for receiving bone screws 16. The apertures are positioned along the longitudinal axis *L* (FIG. 2A) of the bone plate and spaced for fixing separate bone segments such that only a single bone screw is used to secure the plate per vertebral body. The bone plate may also include a locking mechanism 18 to provide bone screw backout resistance. Although the system illustrated in FIG. 1 is used as a one level plate (i.e., bridging two vertebral bodies), as described in more detail below, the system is applicable to plates that bridge more than two vertebral bodies 60, as for example, illustrated in FIG. 11.

FIGS. 2A, 2B, and 2C illustrate a top, side, and end view of bone plate 12, respectively. As shown, the bone plate has a generally elongate shape with a mid-portion 20 positioned between an inferior end 22 and a superior end 24, and a longitudinal axis *L* extends between the inferior and superior ends 22, 24. The bone plate 12 further includes a non-bone-contacting surface 26 and a bone-contacting surface 28, as well as opposed lateral sides 30a, 30b extending therealong between the inferior and superior ends 22, 24. The plate may also include bend zones (not shown), which are thinner areas of the plate that enable a surgeon to bend a plate to match the contour of an anatomical structure on which the plate will be mounted.

As indicated above, plate 12 is adapted to mate to at least two vertebrae. The system and plate illustrated in FIGS. 1 - 2E is adapted to mate between superior and inferior vertebrae, with the inferior end 22 being affixed to an inferior vertebra and superior end 24 affixed to a superior vertebra. Accordingly, the plate 12 preferably includes one or more apertures 14 for receiving a fastening element, such as a bone screw 16, to attach the plate to adjacent vertebrae. Each aperture 14 extends through the plate 12 from a non-bone-contacting surface 26 to a bone-contacting surface 28. In one embodiment, the bone plate is adapted for fixation to the spine using only one bone screw per vertebral body. In this embodiment, the apertures are arranged along the longitudinal axis *L* of the bone plate. FIGS. 1 - 2C illustrate a bone plate in which the plate 12 will span two vertebral bodies and each aperture 14 corresponds to the desired

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position of a bone screw in a vertebral body. The bone plate of FIGS. 2D and 2E spans three vertebral bodies and each aperture 14 corresponds to the desired position of a bone screw in a vertebral body.

5 Bone plate 12 can have a variety to shapes, however, the bone plate generally includes a non-uniform width along its length. In one embodiment, the bone plate has a substantially hourglass shape as illustrated in FIGS. 1 and 2A. As shown, the plate 12 has a maximum (or widest) width at the inferior end 22 and superior end 24 and a minimum (or narrowest) width at mid-portion 20. The maximum width of bone plate
10 12, illustrated as W_1 in FIG. 2A, is preferably less than approximately 14 mm, more preferably less than approximately 12 mm, and even more preferably less than or equal to approximately 10.5 mm. In yet another embodiment, the maximum width of the bone plate is in the range of approximately 5 mm to approximately 10.5 mm. The minimum width, shown as W_2 in FIG. 2A, is generally located across at the mid-portion 20 of bone
15 plate 12 and is preferably in the range of approximately 2 mm to approximately 10 mm, and more preferably from approximately 4 mm to approximately 10 mm. The position of maximum width W_1 usually corresponds to the region of plate that has an aperture while the minimum width W_2 generally corresponds to a region of plate between apertures. One skilled in the art will appreciate that a variety of other bone plate shapes
20 that include a maximum and minimum width can be substituted for the hourglass shape illustrated herein. Plates having a uniform width are also encompassed.

 Apertures 14 in bone plate 12 can have a variety of shapes, as long as they are suitable to receive a fixation element. In one exemplary embodiment, the apertures 14 can be generally circular. In another embodiment, including the illustrated embodiment,
25 the apertures can be in the form of a circle that is slightly elongated in the longitudinal direction. One or more apertures 14 include a diameter that may vary between the non-bone-contacting surface 26 and the bone-contacting surface 28. In one exemplary embodiment, one or more of the apertures 14 has a diameter that tapers from the non-bone contacting surface 26 to the bone-contacting surface 28. For example, as shown in
30 FIGS. 2D and 2E, the apertures of the exemplary plate have a minimum diameter D

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adjacent the bone-contacting surface 28, measured transverse to the longitudinal axis of the plate. One skilled in the art will appreciate that the aperture diameter D depends on the bone screw diameter and the optional use of washers or locking mechanisms. In one
5 exemplary embodiment, the aperture diameter D is in the range of approximately 4 mm to approximately 6 mm. In another embodiment, the aperture diameter D is greater than or equal to approximately 4.6 mm, and in yet another embodiment the aperture diameter D is greater than or equal to approximately 5.2 mm. As discussed further below, the bone plate width and bone screw diameters are matched to one another and in one
10 embodiment, the ratio of the maximum plate width W_1 to the aperture diameter D is preferably less than or equal to approximately 2.7. In another embodiment, the ratio of maximum plate width to the aperture minimum diameter D is preferably in the range of approximately 1.1 to approximately 2.7, more preferably it is in the range of approximately 1.5 to approximately 2.5, and even more preferably it is in the range of
15 approximately 1.9 to approximately 2.5. In an exemplary embodiment, the range is approximately 2.0 to approximately 2.3. In another embodiment the ratio of the maximum plate width W_1 to the aperture minimum diameter D is less than or equal to approximately 2.5

The spacing between apertures 14 depends on distance between vertebral bodies
20 (and/or bone grafts) along the length of a patient's spinal column. In one embodiment, where the bone plate is adapted to provide a single screw per vertebral body (or bone graft), the exemplary hole-to-hole spacing between apertures is preferably in the range of approximately 8 mm to approximately 25 mm. In one embodiment, the ratio of plate width to hole-to-hole spacing is preferably in the range of approximately 0.2 to
25 approximately 1.0, and even more preferably in the range of approximately 0.3 to approximately 0.9.

Bone plate 12 also includes a bone plate thickness T (FIG. 2B) between non-
bone-contacting surface 26 and bone-contacting surface 28. In general, the bone plate
thickness is in the range of approximately 1 mm to approximately 3 mm. For the
30 purpose of measuring bone plate thickness, plate surface features are preferably ignored.

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In an exemplary embodiment, the plate 12 is adapted to be mounted upon the anterior surface of vertebrae in the cervical or lumbar region of the spine. For example, the bone-contacting surface 28 of the exemplary plate 12 can have a longitudinal curve *X* that approximates the lordotic curvature of the vertebrae upon which the plate is to be mounted. As shown in FIG. 2B, the exemplary plate 12 has a longitudinal curve *X* that extends in the sagittal plane (i.e., in the superior-inferior direction) and has a constant radius along the length of the plate 12. Alternatively, the plate 12 may comprise a plurality of longitudinal segments that are configured to collectively provide the plate with a longitudinal curvature that approximates the lordotic curvature of the vertebrae. For example, one or more of the longitudinal segments may have a longitudinal curvature or may be oriented at angle relative to the other longitudinal segments.

While the exemplary plate 12 may be curved only along longitudinal axis *L*, in another embodiment, plate 12 can also include a transverse curve *Y* that approximates the transverse curvature of the vertebrae upon which the plate is to be mounted, as illustrated in FIG. 2C. The plate 12 may have a transverse curvature along the length of the plate 12 or along discrete longitudinal segments of the plate. For example, the mid-portion 20 of the exemplary plate 12 may have a transverse curvature that approximates the transverse curvature of the vertebrae. Alternatively, the inferior end 22 and/or the superior end 24 may have a transverse curvature.

The bone screws 16 useful with the present system preferably have a larger diameter than conventional bone screws used for fixing a bone plate to a vertebral segment. FIGS. 3A and 3B illustrate one embodiment of bone screw 16 for use with the bone plate system. Bone screw 16 preferably includes an elongate body 30 with threads 32 along at least a portion thereof, and a head 34 for mating with bone plate 12 and for optionally receiving a driver tool. The bone screw 16 has a major screw diameter SD_1 and a minor screw diameter SD_2 .

In one embodiment, the dimensions of the bone plate and the bone screws are adapted such that the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7. In another embodiment, maximum plate width

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to the major screw diameter is preferably in the range of approximately 1.1 to approximately 2.7, more preferably in the range of approximately 1.5 to approximately 2.5, and even more preferably in the range of approximately 1.9 to approximately 2.5.

5 In an exemplary embodiment, the range is approximately 2.0 to approximately 2.3.

In one aspect of the present system, the major diameter of bone screw 16 is larger than the major diameter of conventional bone screws. The major screw diameter SD_1 for a standard screw used with system 10 is in the range of approximately 4.4 to approximately 5.0 mm. In an exemplary embodiment, the major screw diameter of a standard screw is equal to or more than approximately 4.6 mm. In another embodiment, system 10 can include oversized revision screws, which are particularly useful when a problem is encountered with implanting the screws (e.g., a new oversized hole must be drilled in place of an existing hole in a vertebral body). In one embodiment, the oversized revision screws have a major diameter in the range of approximately 5.0 mm to approximately 5.6 mm. In an exemplary embodiment, the oversized revision screws have a major screw diameter of approximately 5.2 mm. In yet another aspect, the major diameter of the revision screw is at least 0.6 mm greater than the major diameter of the standard screw.

The bone plate system may include different types of bone screws having varying functionalities. For example, the bone screws can be of a rigid type in which after a screw locking mechanism is engaged, movement of the screw in any direction is prevented. The bone screws can also be of a semi-rigid type in which after a screw locking mechanism is engaged, screw backout is prevented, but the screw is able to move in all directions (i.e., polyaxially). Further, the bone screws can also be of a hybrid type in which after a screw locking mechanism is engaged, screw backout is prevented, but the screw is able to move in only one selected direction (e.g., the superior-inferior or the transverse direction). Moreover, the bone screws may translate within an aperture of a plate. For example, a bone screw may translate along the length of an elongated slot defining an aperture in the plate. One skilled in the art will

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appreciate that a bone plate system may be provided having any single screw type or a combination of all or any of the screw types.

As noted above, the present bone plate system also encompasses multi-level plates, such as a two level plate 112 shown in FIGS. 4A and 4B. Multi-level plates can span more than two adjacent vertebrae, for example, the illustrated plate 112 can span three vertebral bodies. The illustrated multi-level plate includes three apertures 214, with only a single aperture adjacent each vertebral body. In another embodiment, the multi-level plate can be a three or more level plate having four or more apertures for receiving bone screws. The multi-level plates can also be useful for spanning and anchoring bone grafts. For example, the center aperture 214 of bone plate 112 can receive a bone screw for fixing the plate to a bone graft. As noted above, in this embodiment, each aperture 214 is preferably adapted to be the only aperture positioned adjacent to a different vertebral body or a bone graft.

The multi-level plates may include the features of the single level bone plates described above, and thus the dimensions and geometry of the multi-level plates are similarly adapted for a variety of surgical procedures, including minimally invasive surgical procedures. That is, the ratios and dimensions discussed above with respect to a single level plate are equally applicable to multi-level plates.

The present system also encompasses plate system designs in which only a portion of the plate has the dimensions and geometry discussed above. That is, only a portion of the plate is designed such that only a single aperture will be placed adjacent a vertebral body while another portion of the plate can have more traditional or alternative designs. In one embodiment, the bone plate can include an extra wide portion that includes multiple screw apertures adapted to be positioned adjacent to a single vertebral body. Examples of such designs are illustrated in FIGS. 5 and 6.

The plates illustrated in FIG. 5 include an extra wide portion 238 at one end thereof. As shown, the extra wide portion includes multiple apertures 214 adapted for positioning adjacent to a single vertebral body. In use, multiple bone screws can be used to fix the wider end 222 of the bone plate (FIG. 5) to a single bone segment. A person

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skilled in the art will appreciate that an extra wide portion 238 at the inferior or superior end of the bone plate can have a variety of shapes. In addition, an extra wide end of the bone plate 212 can be adapted for mating with a drill guide.

5 FIGS. 6 and 7 illustrates a plate 212', 212'' having an extra wide portion 238 at the mid-portion 220. This extra wide portion 238 can provide additional surface area for fixation to a vertebra. The extra wide portion can provide additional stability to the bone graft and helps to prevent shifting under load, and it can have a single aperture (FIG. 7) or more than one aperture (FIG. 6).

10 The bone plate 212, 212', 212'' illustrated in FIGS. 5-7, also includes a region that is adapted for fixing a single bone screw per vertebral body thereby presenting a minimal profile in this region of the plate. This region has the dimensions and geometry discussed above with respect to the single level plate. For example, the superior end 224 of plates 212, 212', and 212'' can include the uniquely matched plate width and major
15 screw diameter. The major width W_1 used to determine the ratio of plate width to major screw diameter is measured across an aperture in a portion of the bone plate adapted for fixing a single bone screw per vertebral body. For example, the plate width in FIGS. 5 and 6 can be measured at the superior end 224 or the inferior end 222 across the aperture 214 in the superior or inferior end.

20 In an alternative embodiment, illustrated in FIG. 7, the plate 212'' has an extra wide central portion 220 that includes only a single aperture adapted for positioning adjacent to a vertebral body. Preferably, the inferior and superior ends of the plate 212'' have a minimal profile with the dimensions and geometry discussed above with respect to the single level plate. The maximum plate width as measured at inferior end 222
25 and/or at superior end 224 preferably falls within the desired bone plate system ratios. In particular, ratio of the maximum plate width measured across an aperture at the inferior end (and/or the superior end) to the major screw diameter is preferably less than or equal to approximately 2.7. In another embodiment, the maximum plate width measured across an aperture at the inferior end (and/or the superior end) to the major
30 screw diameter is in the range of approximately 1.1 to approximately 2.7, more

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preferably in the range of approximately 1.5 to approximately 2.5, and even more preferably in the range of approximately 1.9 to approximately 2.5. In an exemplary embodiment, the range is approximately 2.0 to approximately 2.3.

5 The various embodiments of the bone plate system can include additional features that provide bone plate stabilization. For example, the bone contacting surface of the bone plate may include surface features that facilitate engagement of the plate to a surface of a vertebra. In the exemplary plate 12 described above, for example, the bone-
10 contacting surface 28 of the plate 12 may include one or more cleats 29 to facilitate engagement of the bone contacting surface 28 to a surface of a vertebra. The cleats 29, in the exemplary embodiment, are oriented transverse to the longitudinal axis L of the plate 12 and span the width of the plate 12. The bone plates may include other surface features. For example, in one embodiment, the bone plate (12, 112, 212) includes one or
15 more bone-engaging spikes positioned adjacent to the lateral edge of the bone plate. As shown in FIGS. 8A and 8B, the three pairs of bone-engaging spikes 50 extend downward from the bone plate to minimize rotational or torsional plate movement. In
another embodiment, bone-engaging spikes 50 can be spaced from the lateral edge of the bone plate as shown in FIGS. 9A and 9B. As shown, a pair of bone-engaging spikes 50
20 extend outward from the side of the bone plate and then extend downward. The spacing between bone-engaging spikes in a pair may correspond to the approximate width of a vertebral body such that the spikes are adapted to be positioned on the sides of a
vertebral body to promote rotational and/or torsional stability.

One skilled in the art will appreciate that the bone-engaging spikes 50 can be positioned anywhere along the edge of the bone plate, or elsewhere on the bone-
25 contacting surface of the plate. In one embodiment, the bone-engaging spikes are positioned on the edge of the bone plate at the maximum plate width. In another embodiment, at least one set of bone-engaging spikes is positioned adjacent an aperture, and in yet another embodiment, bone-engaging spikes are positioned adjacent to each aperture.

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The various embodiments of the bone plate system can additionally include a locking or retaining mechanism 18 for preventing bone screw backout. For example, the bone plate (12, 112, 212) can include an integrated locking mechanism present on the non-bone-contacting surface of the plate 12. The integrated locking mechanism can be in the form of a rotatable cam 52 which can be rotated between a locked and an unlocked position. FIGS. 10A and 10B illustrate a cut-away view of cam 52 in an unlocked (FIG. 10A) and locked position (FIG. 10B). In the locked position, the rotatable cam 52 is forced against the head of the bone screw to provide bone screw backout resistance. An exemplary cam-type locking mechanism is described in U. S. Patent No. 5,549,612, which is incorporated by reference herein in its entirety. One skilled in the art will appreciate that a variety of other retaining mechanisms can be used as well, including those that are integrated with the plate and those that are not. Exemplary retaining mechanisms include locking washers, locking screws, and bone screw covers. One skilled in the art will appreciate that various combinations of locking mechanisms can be used as well.

The exemplary bone plate systems described herein may be constructed of any biocompatible material including, for example, metals, such as stainless steel and titanium, polymers, and composites thereof. In certain exemplary embodiments, the bone plate system may be constructed of a bio-resorbable material, such as, for example polylactic acid (PLA) and polyglycolic acid (PGA), and blends or copolymers thereof.

The bone plate system, as described above, can be implanted by any type of surgical procedure, including minimally invasive surgical techniques. For example, the exemplary bone plate systems described herein may be implanted through a minimally invasive access system, including for example a port or a retractor. Exemplary minimally invasive access systems and methods are described in U.S. Patent No. 6,159,179; U.S. Patent Application Publication No. 2003/0083689; U.S. Patent Application Publication No. 2003/0083688; and U.S. Patent Application Serial No. 60/589,727, filed July 21, 2004, each of which is incorporated herein by reference. One skilled in the art will appreciate further features and advantages of the invention based

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on the above-described embodiments. Accordingly, the invention is not to be limited by what has been particularly shown and described, except as indicated by the appended claims. All publications and references cited herein are expressly incorporated herein by reference in their entirety.

What is claimed is:

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CLAIMS:

1. A bone plate system, comprising:
 - 5 an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, a maximum plate width, and a plurality of apertures extending from the first surface to the second surface for receiving bone screws, the second bone-contacting surface having a sagittal curvature approximate to a lordotic curvature of an anterior surface of vertebrae upon which the plate is adapted to be
 - 10 mounted; and
a plurality of bone screws capable of insertion into bone, the screws having a major screw diameter;
wherein the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7.
- 15 2. The system of claim 1, wherein the maximum plate width to the major screw diameter is in the range of approximately 1.1 to approximately 2.7.
3. The system of claim 1, wherein the maximum plate width to the major screw
- 20 diameter is in the range of approximately 1.5 to approximately 2.5.
4. The system of claim 1, wherein the maximum plate width to the major screw diameter is in the range of approximately 1.9 to approximately 2.5.
- 25 5. The system of claim 1, wherein the maximum plate width to the major screw diameter is in the range of approximately 2.0 to approximately 2.3.
6. The system of claim 1, wherein the plurality of apertures are aligned along a
- 30 longitudinal axis of the bone plate.

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7. The system of claim 1, wherein the bone plate has a width at a first end thereof that is greater than the width at a second end thereof.

5 8. The system of claim 7, wherein the bone plate further includes at least one aperture disposed intermediate the first and second end that is positioned along a longitudinal axis of the bone plate.

10 9. The system of claim 7, wherein the first end of the bone plate has a plurality of transverse apertures oriented substantially transverse to a longitudinal axis of the bone plate, wherein each of the plurality of transverse apertures is adapted for placement adjacent to the same vertebral body, and wherein the apertures at the second end of the bone plate are aligned along the longitudinal axis of the bone plate and each aperture at the second end of the bone plate is adapted for placement adjacent to a different
15 vertebral body.

10. The system of claim 9, wherein the maximum plate width is measured across an aperture in the second end of the bone plate.

20 11. The system of claim 1, further including a retaining mechanism for preventing bone screw backout.

12. The system of claim 1, wherein the ratio of the maximum plate width to a maximum plate thickness is in the range of approximately 3 to approximately 8.

25 13. The system of claim 1, wherein the bone plate further comprises a plurality of bone-engaging protrusions extending from at least one surface thereof.

30 14. The system of claim 1, wherein each of the plurality of apertures is adapted to be positioned adjacent to a different vertebral body.

- 20 -

15. A bone plate, comprising:

5 a first surface and an opposed second, bone-contacting surface, a plurality of apertures extending through the bone plate from the first surface to the second surface, each of the plurality of apertures being adapted to receive a bone screw and being aligned with a longitudinal axis of the bone plate, and an integrated retaining member to inhibit backout of a screw from the apertures, the bone plate having a width that varies along the longitudinal axis including a maximum width and a minimum width, wherein the ratio of the maximum width to a minimum diameter of the apertures, measured in a direction transverse to the longitudinal axis, is less than or equal to approximately 2.5.

16. The bone plate of claim 15, wherein the integrated retaining member is a cam positioned on the first surface of the bone plate proximate an aperture.

15 17. A bone plate system, comprising:

20 a bone plate having a first surface and a second bone-contacting surface opposed to the first surface, and a plurality of apertures extending from the first surface to the second surface for receiving bone screws, the apertures positioned along a longitudinal axis of the bone plate and spaced such that each aperture is adapted for placement adjacent to a different vertebral body, the bone plate having an elongate shape with a width that varies along the longitudinal axis of the bone plate, wherein a maximum width is less than or equal to approximately 10.5 mm; and

25 a plurality of bone screws capable of insertion into bone, each screw having a major screw diameter of at least approximately 4.6 mm.

18. The system of claim 17, including an oversized screw having a major diameter of at least approximately 0.6 mm greater than the major screw diameter of the plurality of bone screws.

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19. A bone plate, comprising:

an elongate member having a superior end, a inferior end, a first surface, a second bone-contacting surface opposed to the first surface, and a plurality of apertures extending through the elongate member from the first surface to the second surface, the elongate member further including a width at a first end that is greater than a width at a second end, wherein each aperture at the first end is aligned transversely to a longitudinal axis of the elongate member and is adapted to be positioned adjacent to a single vertebral body and each aperture at the second end of the elongate member is aligned with the longitudinal axis and adapted to be positioned adjacent to a different vertebral body; and

wherein the ratio of the maximum bone plate width measured at the second end to a minimum diameter of the apertures, measured in a direction transverse to the longitudinal axis, is less than or equal to approximately 2.5.

20. A bone plate, comprising:

an elongate member having a first end, a central portion, a second end, a first surface, a second bone-contacting surface opposed to the first surface, and a plurality of apertures extending through the elongate member from the first surface to the second surface, the elongate member further including a width in the central portion that is greater than a width at each of the first end and the second ends, wherein the aperture in the first and the aperture in the second end are aligned along a longitudinal axis of the elongate member and is adapted to be positioned adjacent to a different vertebral body; and

wherein the ratio of the maximum bone plate width measured at the first end to a minimum diameter of the apertures, measured in a direction transverse to the longitudinal axis, is less than or equal to approximately 2.5.

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21. The bone plate of claim 19, wherein the ratio of the maximum bone plate width measured at the second end to the diameter of the apertures is less than or equal to approximately 2.5.

5

22. The bone plate of claim 19, wherein the central portion includes at least one aperture positioned along the central longitudinal axis of the elongate member.

23. A method of implanting a bone plate system, comprising:

10 providing an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, a maximum plate width, a minimum plate width, and a plurality of apertures extending from the first surface through to the second surface for receiving bone screws, the bone plate further including a locking mechanism for preventing bone screw backout,

15 providing a plurality of bone screws capable of insertion into bone, the screws having a major screw diameter, wherein the ratio of the maximum plate width to the major screw diameter is less than or equal to approximately 2.7;

creating at least one incision to provide access to a site on or adjacent to a patient's spinal column;

20 inserting the bone plate through the at least one incision and placing the bone plate at a desired location spanning at least two vertebral bodies; and

inserting a bone screw through the at least one incision and through an aperture in the bone plate such that each bone screw is implanted in a different vertebral body and each vertebral body receives only one bone screw.

25

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24. The method of claim 23, wherein the length of each of the at least one incision is equal to or less than the maximum plate width.

5 25. A bone plate system, comprising:

an elongate bone plate having a first surface, a second bone-contacting surface opposed to the first surface, and a plurality of apertures extending from the first surface to the second surface for receiving bone screws, the second bone-contacting surface having a curvature approximate to a lordotic curvature of an anterior surface of vertebrae upon which the plate is adapted to be mounted;

10 a plurality of bone screws capable of insertion into bone, the screws having a major screw diameter; and

an oversized screw having a major diameter of at least approximately .6 mm greater than the major screw diameter of the plurality of bone screws.

15

26. The bone plate system of claim 25, further comprising an integrated retaining member to inhibit backout of a screw from an aperture.

20 27. The bone plate system of claim 25, wherein each aperture of the plurality of apertures is aligned along a longitudinal axis of the plate.

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FIG. 1

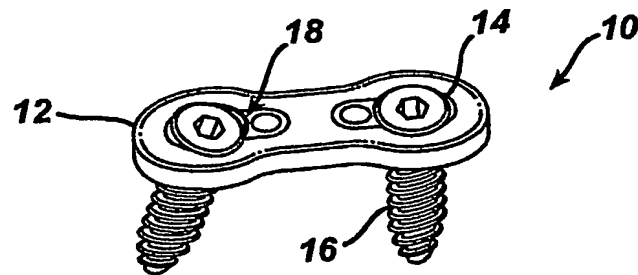


FIG. 2A

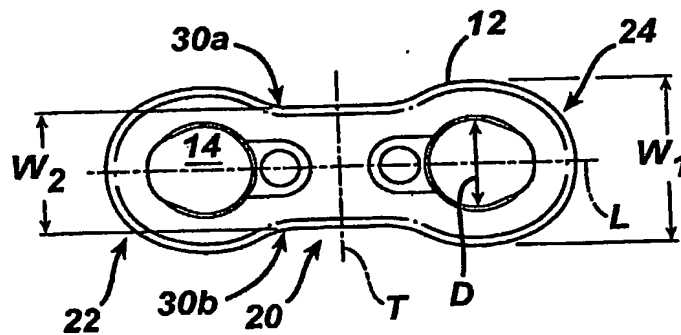


FIG. 2B

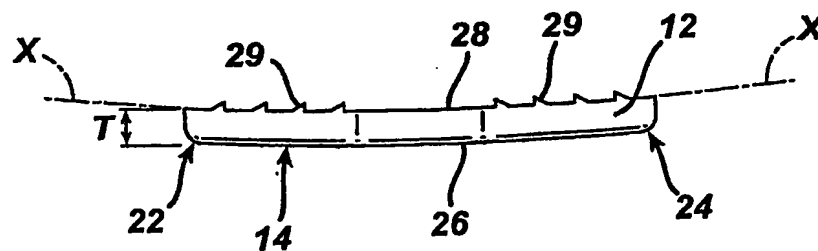
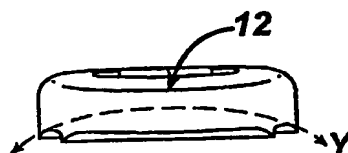


FIG. 2C



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FIG. 2D

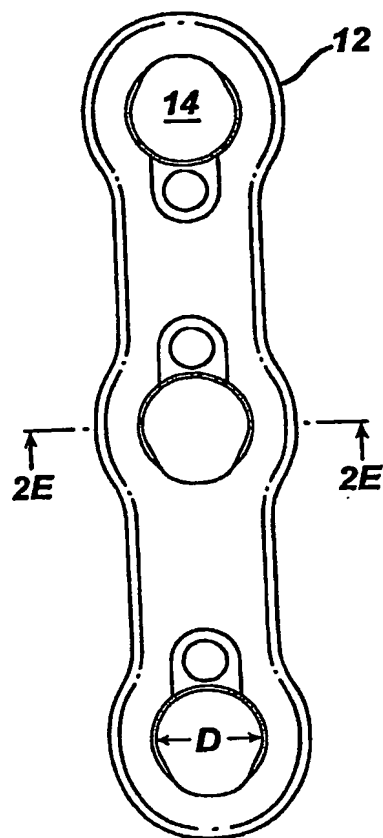
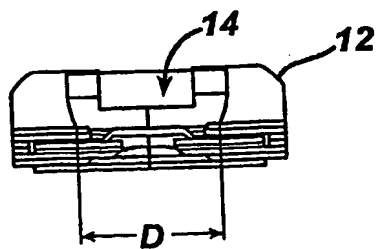


FIG. 2E



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FIG. 3A

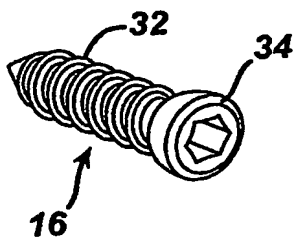


FIG. 3B

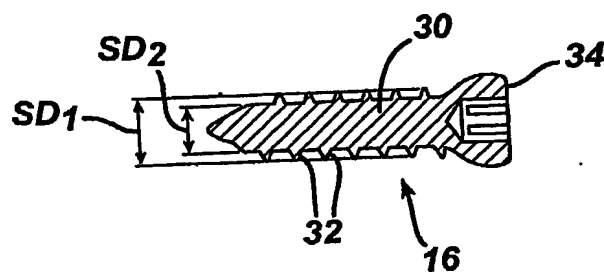


FIG. 4A

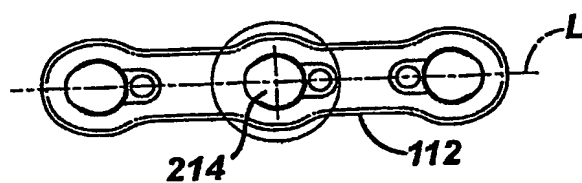
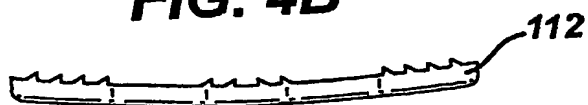


FIG. 4B



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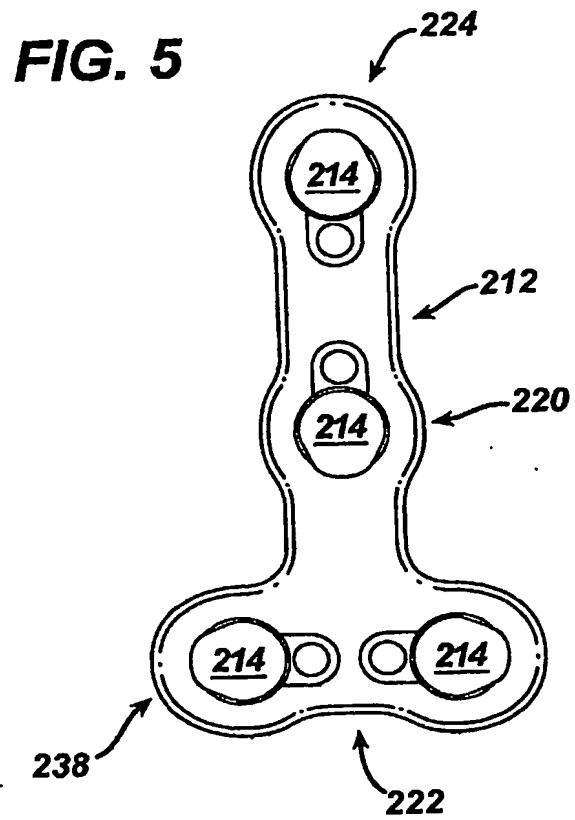


FIG. 6

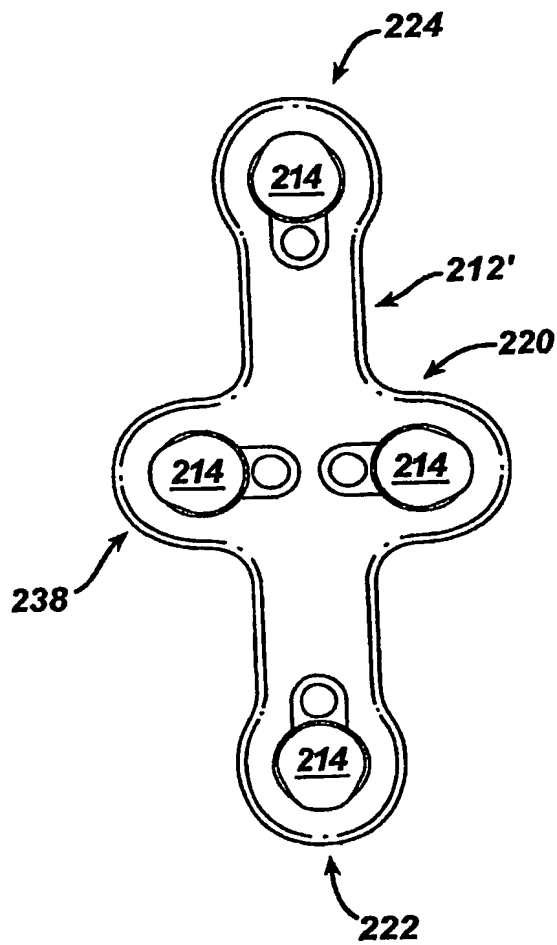
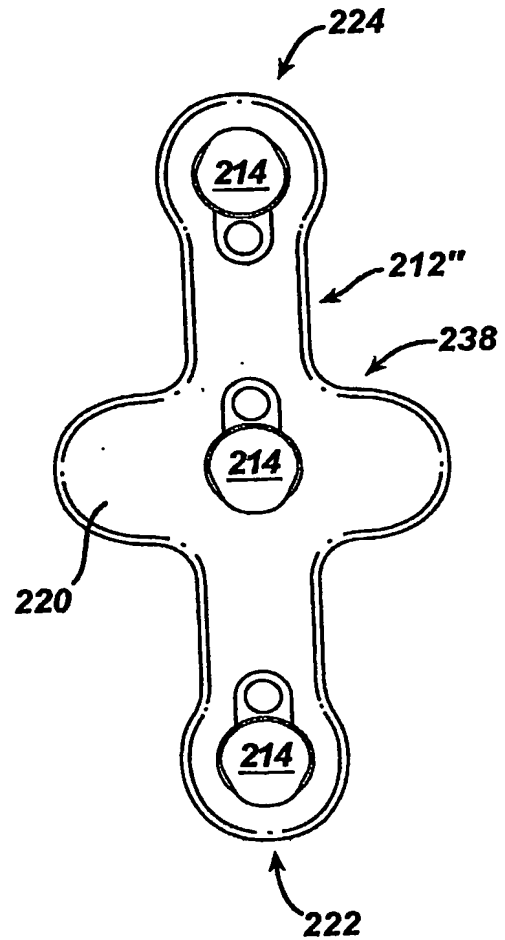
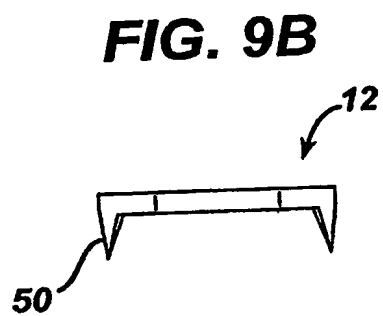
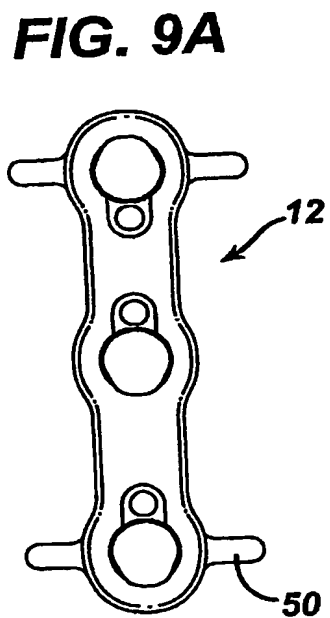
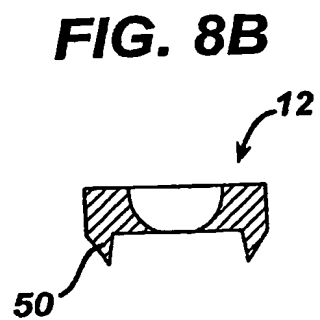
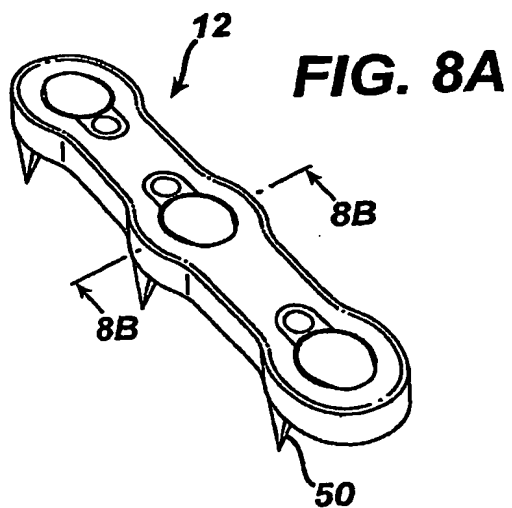


FIG. 7



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FIG. 10A

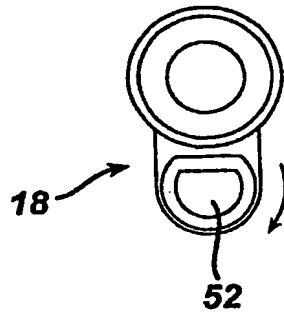
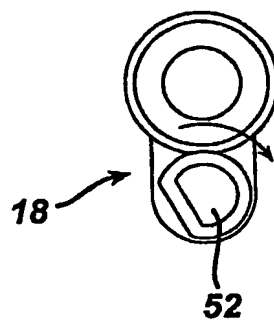
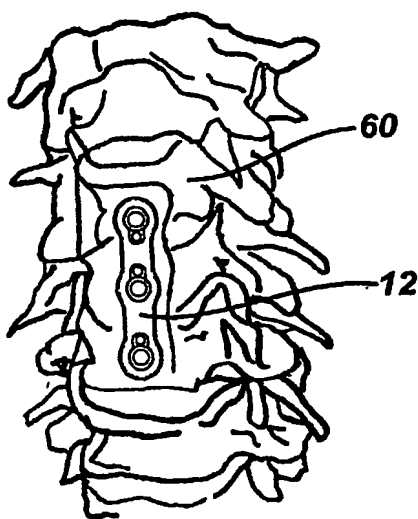


FIG. 10B



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FIG. 11





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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,154	07/15/2003	David J. Talaber	R0372-00101	8486

7590 11/21/2006
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EXAMINER

RAMANA, ANURADHA

ART UNIT	PAPER NUMBER

3733

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3733	

All participants (applicant, applicant's representative, PTO personnel):

(1) David J. Talaber.

(3) Mark F. Schroder.

(2) Edward J. Lynch.

(4) _____.

Date of Interview: 16 November 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☒ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.

If Yes, brief description: _____.

Claim(s) discussed: 29, 52, 54, 59, 60, 63, 84, 89, 94, 96, 102 and 107.

Identification of prior art discussed: Errico et al. (US 5,876,402) and Estes (US 5,578,034).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's Representative, Edward J. Lynch, proposed amendments that appear to overcome the rejections of record. The Examiner agreed to reconsider the rejections of record when the proposed amendments are submitted as a formal amendment. The Examiner is not documenting the proposed amendments, at this time, due to their extensive nature.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.



DUANE MORRIS LLP
ONE MARKET, SPEAR TOWER, SUITE 2000
SAN FRANCISCO, CA 94105-1104
PHONE: 415.957-3000
FAX: 415.957-3001

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SEP 29 2006

FACSIMILE TRANSMITTAL SHEET

To: Mail Stop REISSUE

FIRM/COMPANY: Commissioner for Patent

FACSIMILE NUMBER: 571 273-8300

**CONFIRMATION
TELEPHONE:**

FROM: Ruth Der, Paralegal

DIRECT DIAL: 415.957-3031

DATE: September 29, 2006

USER NUMBER:

FILE NUMBER: Atty. Docket No. R0372-00101, Serial No. 10/620,154

TOTAL # OF PAGES: 3
(INCLUDING COVERSHEET)

MESSAGE: Attached is *Notification of Change to Large Entity Status*.

Please confirm receipt of this facsimile.

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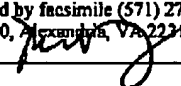
SEP 29 2006

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	) Examiner: Anuradha Ramana
Patent No.: 6,261,291	) Group Art Unit: 3733
Issued: July 17, 2001	) Attorney Docket No.: R0372-00101
Inventors: Talaber et al.	)
Reissue Serial No.: 10/620,154	)
For: ORTHOPEDIC IMPLANT ASSEMBLY	)
Filed: July 15, 2003	)

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8900 and addressed to Attn: Examiner Anuradha Ramana, Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 9/29/2006 in San Francisco, CA.
By: 

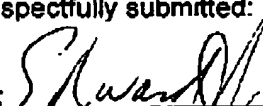
Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants herein notify the Patent Office and assert that they are now to be considered as a large entity in the above-identified reissue application.

There is no fee due with this communication. Should the Commissioner find otherwise, the Commissioner is authorized to charge the fees due and to credit any overpayment of fees set forth under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this transmittal is enclosed for this purpose.

Respectfully submitted:

By: 
Edward J. Lynch
Reg. No. 24,422
Attorney for Applicants

DUANE MORRIS LLP
One Market
Spear Tower, Ste. 2000
San Francisco, CA 94105
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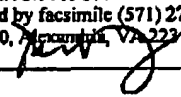
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Anuradha Ramana
Patent No.: 6,261,291	)	Group Art Unit: 3733
Issued: July 17, 2001	)	Attorney Docket No.: R0372-00101
Inventors: Talabar et al.	)	
Reissue Serial No.: 10/620,154	)	
For: ORTHOPEDIC IMPLANT ASSEMBLY	)	
Filed: July 15, 2003	)	

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8200 and addressed to Attn: Examiner Anuradha Ramana, Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 9/29/2006 in San Francisco, CA.

By: 

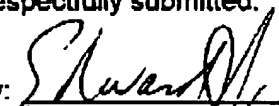
Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

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There is no fee due with this communication. Should the Commissioner find otherwise, the Commissioner is authorized to charge the fees due and to credit any overpayment of fees set forth under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this transmittal is enclosed for this purpose.

Respectfully submitted:

By: 

Edward J. Lynch
Reg. No. 24,422
Attorney for Applicants

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Direct Dial: (415) 957-3067

COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.

10/620,154

07/15/2003

David J. Talaber

R0372-00101

8486

7590

09/08/2006

Edward J Lynch
Duane Morris LLP
One Market
Spear Tower Suite 2000
San Francisco, CA 94105

EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3733

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/620,154	Applicant(s) TALABER ET AL.	
	Examiner Anu Ramana	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 1-28, 51, 54-58 and 74-88 is/are allowed.
 6) ☒ Claim(s) 29-39, 41-50, 52, 53, 59-71, 73 and 89-105 is/are rejected.
 7) ☒ Claim(s) 40 and 72 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/10/2003</u> .	6) ☐ Other: _____

DETAILED ACTION

The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414. At least one box in PTO/SB/51 must be checked.

This application is also objected to under 37 CFR 1.172(a) as lacking the written consent of all assignees owning an undivided interest in the patent. The consent of the assignee must be in compliance with 37 CFR 1.172. See MPEP § 1410.01.

A proper assent of the assignee in compliance with 37 CFR 1.172 and 3.73 is required in reply to this Office action. It is unclear whether Mr. David J. Talaber is an officer of the company as required. See MPEP 324 V. For this reason, the Consent Form is deemed to be deficient.

Claim Objections

Claim 39 is objected to because it is unclear which claim it depends from. For purposes of examination, it has been assumed to depend on claim 37. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 52-53, 59 and 103-105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 52, line 19, "the stopping member" lacks antecedent basis.

In claim 59, lines 22 and lines 23-24, "the second opening" and "the stopping member" lack antecedent basis.

In claim 103, line 2, "the biased stopping member" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

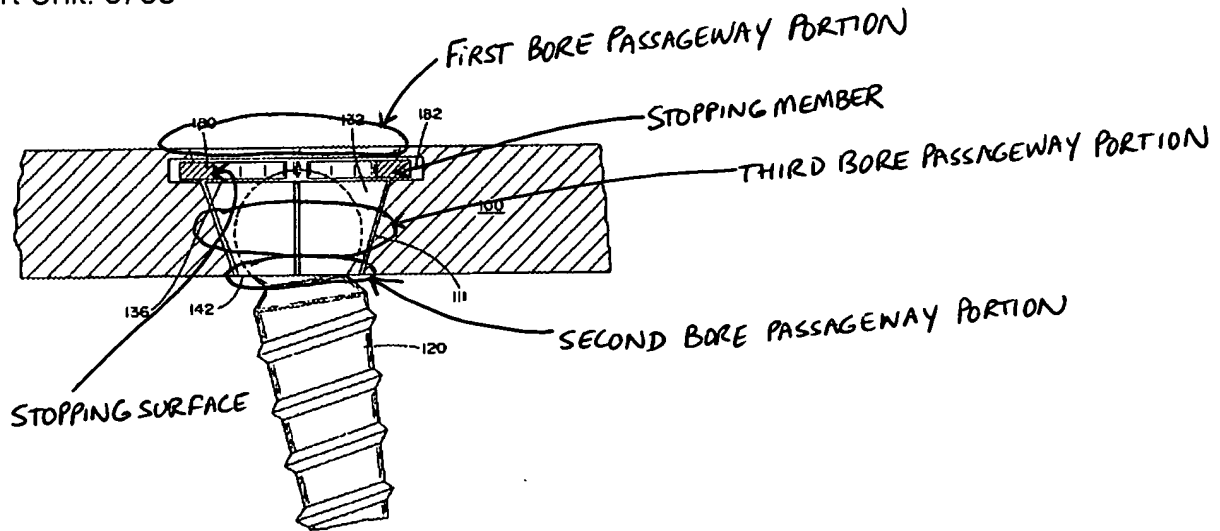
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 29-39, 41-48, 50-51, 60-71, 73 and 89-105 are rejected under 35 U.S.C. 102(e) as being anticipated by Errico et al. (US 5,876,402).

Errico et al. disclose an attachment component or stabilizing element 100 including: a bore 111 having a first bore passageway portion and a second bore passageway portion with at least one smaller transverse dimension than the first bore passageway portion; a stopping member 180 having a biased stopping surface; and a third bore passageway portion between the biased stopping surface and the second bore passageway portion having a surface configured to conform to the enlarged portion or head of the securing component (Fig. 6, col. 5, lines 41-67 and col. 6, lines 1-55). See marked up Figure 6 from Errico et al. below.

Regarding claim 45, a fixation element such as a plate conforms to the surface of the underlying bone and thus could have a curved surface.



Regarding claims 94 and 95, it is noted that resilient stopping member 180 deflects radially as well as longitudinally due to its resilient nature.

Claims 60-67, 69-71, 73-79 and 89-95 are rejected under 35 U.S.C. 102(b) as being anticipated by Estes (US 5,578,034).

Estes discloses an attachment component or stabilizing element 12 including: a bore 18 configured to receive a fastening element or securing member 14, the bore having a first passageway portion and a second passageway portion, the second passageway portion having a smaller transverse dimension than a transverse dimension of the first passageway portion; a stopping surface which reduces a transverse configuration of the first passageway portion; a stopping member 16 defining a reversibly expandable passageway; and a third bore passageway portion between the stopping surface and the second bore passageway portion wherein the third bore passageway portion has a surface configured to conform at least in part to an enlarged portion of securing member 14 (Fig. 1, col. 4, lines 36-67, col. 5 and col. 6, lines 1-46). See marked up Fig. 1 from Estes below.

herein enhanced mechanical properties including fatigue endurance, as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

Claim 59 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 40 and 72 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-28, 51, 54-58 and 74-88 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

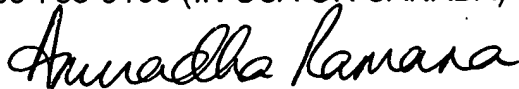
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached at (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR

September 3, 2006



EDUARDO C. ROBERT
SUPERVISORY PATENT EXAMINER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

SHEET 1 OF 2



ATTORNEY DOCKET NO.:

R0372-00101

SERIAL NO.:

10/620,154

APPLICANTS:

Talaber et al.

EXAMINER

Not yet assigned

FILING DATE:

July 15, 2003

GROUP ART UNIT:

3731

U.S. PATENT DOCUMENTS

EXR INITIAL	REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
AR	*A1	3,350,103	10/67	Ahlstone		
↑	*A2	3,863,959	2/75	Blaschke		
	*A3	4,017,946	4/77	Soja		
	*A4	4,280,742	7/81	Justman		
	*A5	4,488,543	12/84	Tornier		
	*A6	4,662,461	5/87	Garrett		
	*A7	4,696,290	9/87	Steffee		
	*A8	5,054,347	10/91	Johnson et al.		
	*A9	5,169,597	12/92	Davidson et al.		
	*A10	5,275,601	1/94	Gogolewski et al.		
	*A11	5,364,399	11/94	Lowery et al.		
	*A12	5,372,660	12/94	Davidson et al.		
	*A13	5,509,933	4/96	Davidson et al.		
	*A14	5,520,690	5/96	Errico et al.		
	*A15	5,534,032	7/96	Hodorek		
	*A16	5,569,251	10/96	Baker et al.		
	*A17	5,578,034	11/96	Estes		
	*A18	5,601,552	2/97	Trebing et al.		
	*A19	5,607,426	3/97	Ralph et al.		
	*A20	5,643,265	7/97	Errico et al.		
	*A21	5,725,588	3/98	Errico et al.		
	*A22	5,735,853	4/98	Olerud		
	*A23	5,785,711	7/98	Errico et al.		
	*A24	5,807,396	9/98	Ravch		
	*A25	5,810,819	9/98	Errico et al.		
	*A26	5,843,082	12/98	Yuan et al.		
	*A27	5,876,402	3/99	Errico et al.		
	*A28	5,879,389	3/99	Koshino		
	*A29	5,904,683	5/99	Pohndorf		
	*A30	5,928,243	7/99	Guyer		
↓	*A31	5,935,133	8/99	Wagner et al.		
AR	*A32	5,961,518	10/99	Errico et al.		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.:

SERIAL NO.:

INFORMATION DISCLOSURE STATEMENT

R0372-00101

10/620,154

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

APPLICANTS:

EXAMINER

Talaber et al.

Not yet assigned

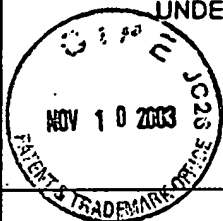
FILING DATE:

GROUP ART UNIT:

July 15, 2003

3731

SHEET 2 OF 2



U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
AK	*A33	5,964,769	10/99	Wgner et al.		
	*A34	5,989,250	11/99	Wagner et al.		
	*A35	5,997,539	12/99	Errico et al.		
	*A36	6,017,344	1/00	Errico et al.		
	*A37	6,030,389	2/00	Wagner et al.		
	*A38	6,045,579	4/00	Hochshuler et al.		
	*A39	6,053,921	4/00	Wagner et al.		
	*A40	6,117,173	9/00	Taddia et al.		
	A41	6,139,550	10/00	Michelson		
	A42	6,193,721	2/01	Michelson		
	A43	6,398,783	6/02	Michelson		
AK	A44	6,620,163	9/03	Michelson		

FOREIGN PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	COUNTRY	TRANSLATION (YES/NO)	
AK	*B1	DE 4409833 A1	10/95	Germany		
	*B2	DE 19545612 A1	6/97	Germany		
	*B3	WO 98/17188	4/98	PCT		
	*B4	WO 98/48739	11/98	PCT		
AK	*B5	WO 99/00904	3/99	PCT		

OTHER DOCUMENTS

† EX'R INITIAL	*REF. #	Document Description (including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER'S SIGNATURE

DATE CONSIDERED

9/5/06

† EXAMINER:

Initial if reference is considered, whether or not citation is in conformance with MPEP 609.
 Line through citation if not in conformance and not considered.
 Include copy of this form in next communication to applicant.

* If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120. 37 C.F.R. 1.98(d).

Notice of References Cited	Application/Control No. 10/620,154		Applicant(s)/Patent Under Reexamination TALABER ET AL.	
	Examiner Anu Ramana		Art Unit 3733	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,531,554	07-1996	Jeanson et al.	411/399
*	B	US-6,017,345	01-2000	Richelsoph, Marc	606/70
*	C	US-6,010,503	01-2000	Richelsoph et al.	606/61
*	D	US-6,139,550	10-2000	Michelson, Gary K.	606/69
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims



Application/Control No.

10/620,154

Examiner

Anu Ramana

Applicant(s)/Patent under Reexamination

TALABER ET AL.

Art Unit

3733

✓	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claim	Date
Final	Original
1	9/11/06
2	✓
3	✓
4	✓
5	✓
6	✓
7	✓
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11	✓
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49	✓
50	✓

Claim	Date
Final	Original
51	9/11/06
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Claim	Date
Final	Original
101	9/11/06
102	✓
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Anu Ramana

3733

[illegible]

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

[illegible]



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Bib Data Sheet

CONFIRMATION NO. 8486

SERIAL NUMBER 10/620,154	FILING OR 371(c) DATE 07/15/2003 RULE	CLASS 606	GROUP ART UNIT 3733	ATTORNEY DOCKET NO. R0372-00101

APPLICANTS
 David J. Talaber, Livermore, CA;
 James R. Lloyd, Elm Grove, WI;

**** CONTINUING DATA ******* *OK. At 9/3/06*
 This application is a REI of 09/349,519 07/08/1999 PAT 6,261,291

**** FOREIGN APPLICATIONS ******* *None. At 9/3/06*

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
**** 01/06/2004**

Foreign Priority claimed ☐ yes ☒ no	STATE OR COUNTRY CA	SHEETS DRAWING 7	TOTAL CLAIMS ~~62~~ 105	INDEPENDENT CLAIMS ~~10~~ 15
35 USC 119 (a-d) conditions met ☐ yes ☒ no ☐ Met after Allowance				
Verified and Acknowledged Examiner's Signature <i>Amiradell</i> Initials <i>AK</i>				

ADDRESS
 Edward J Lynch
 Duane Morris LLP
 One Market
 Spear Tower Suite 2000
 San Francisco, CA 94105

TITLE
 Orthopedic implant assembly

FILING FEE RECEIVED 3053	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	902	606/69,70.ccls.	US-PGPUB; USPAT	OR	OFF	2006/09/03 18:01
L4	2338	606/71-73.ccls.	US-PGPUB; USPAT	OR	OFF	2006/09/03 18:03
L5	612	606/60,66,68.ccls.	US-PGPUB; USPAT	OR	OFF	2006/09/03 18:31
L6	1	"5578034".pn.	US-PGPUB; USPAT	OR	OFF	2006/09/03 18:31
L7	8	("4484570" "4880343" "5261909" "5269784" "5275601" "5290289" "5364399" "5366331").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 18:31
L8	59	("5578034").URPN.	USPAT	OR	OFF	2006/09/03 18:35
L9	1	"6139550".pn.	USPAT	OR	OFF	2006/09/03 19:22
L10	1	"7001389".pn.	USPAT	OR	OFF	2006/09/03 19:22
L11	64	("1572770" "20010037112" "20020045898" "20020058939" "20020128655" "20020151899" "20030045880" "20030181912" "20030199876" "20030208204" "20030225409" "20040181226" "20040220572" "3138188" "3221794" "3770036" "3777358" "4906150" "4919581" "5073070" "5269784" "5364399" "5423826" "5520690" "5531554" "5531746" "5534027" "5549612" "5578034" "5607426" "5616144" "5643265" "5647873" "5669911" "5690630" "5725588" "5735853" "5810823" "5817094" "5876402" "5882350" "5888204" "5902303" "5931838" "6059785" "6113601" "6152927" "6235033" "6331179" "6383186" "6428542" "6454769" "6575975" "6592586" "6599290" "6602255" "6613053" "6616666" "6620163" "6695846" "6712818").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 20:21

EAST Search History

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L13	5569	screw\$1 same (compressible deformable) same head\$1	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 20:26
L14	34	4 and 13	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 20:26

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L24	2	("5549608" "5989250").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 21:17
L25	5	("5207678" "5443467" "5520690" "5607426" "5669911").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 21:18
L26	12	("4857269" "4952236" "5364399" "5876402" "5879389" "6090111" "6102952" "6139550" "6152927" "6193721" "6261291" "6458133").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 21:18

EAST Search History

L27	17	("1179136" "1395286" "1410387" "2107604" "2288123" "4640524" "4668469" "4673407" "4905546" "5019103" "5534027" "5609641").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/09/03 21:20
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FAX: 415.957.3001

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TO: Mail Stop Reissue – Group Art Unit: 3731

FIRM/COMPANY: U.S. Patent and Trademark Office

FACSIMILE NUMBER: 571.273.8300

**CONFIRMATION
TELEPHONE:**

FROM: Anne Marie Leavy-Ghazi for Edward J. Lynch

DIRECT DIAL: 415.957.3017

DATE: April 25, 2006

USER NUMBER: 5121

FILE NUMBER: Docket No. R0372-00101

TOTAL # OF PAGES: 10
(INCLUDING COVERSHEET)

MESSAGE: Attached is a Third Preliminary Amendment in connection with Reissue Application Serial No. 10/620,154, filed July 15, 2003.

Please confirm receipt of this facsimile.

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APR 25 2006

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Examiner: Not yet assigned

Group Art Unit: 3731

Atty. Docket No.: R0372-00101

TRANSMITTAL

Filed: July 15, 2003

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 C.F.R. §1.8

I hereby certify that these papers are being sent by facsimile to (571) 273-8300, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 25, 2006, in San Francisco, CA.

Anne Marie Leavy-Ghagh
Anne Marie Leavy-Ghagh

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application is a Third Preliminary Amendment.

2. Claim Fee Calculation

No additional claim fee is required.

X

Amendment increases number of claims or multiple dependencies.

Additional Claim Fee Calculation

Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	2201	16 - 12 =	4 x	\$100=	\$400
Total Claims	2202	105 - 80 =	25 x	\$25=	\$625

Total Fees Due... \$1,025

3. Payment of Fees

X

Enclosed is a check for the total fees due in the amount of ____.

The Commissioner is authorized to charge any additional fees and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101.

A duplicate copy of this request is enclosed.

By: *Edward J. Lynch*

Edward J. Lynch

Registration No. 24,422

Duane Morris LLP
One Market
Spear Tower, Suite 2000
San Francisco, CA 94105
Direct Dial: (415) 957-3067
Facsimile: (415) 957-3004

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APR 25 2006

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: ORTHOPEDIC IMPLANT
ASSEMBLY

Filed: July 15, 2003

) Examiner: Not yet assigned

) Group Art Unit: 3731

) Attorney Docket No.: R0372.00101

) THIRD PRELIMINARY AMENDMENT

CERTIFICATE OF MAILING/FACSIMILE PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile (571) 273-8300 and addressed to Mail Stop Reissue,
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 4-25-06 in San Francisco, CA.

By

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450THIRD PRELIMINARY AMENDMENT

Dear Sirs:

Please preliminarily amend the above identified reissue application as follows.

04/26/2006 TL0111 00000050 041679 10620154

01 FC:2201 400.00 DA
02 FC:2202 625.00 DA

1 of 7

Reissue Serial No. 10/620,154
Atty. Docket No. R0372-00101

IN THE CLAIMS

Please add new claims 89-105 as indicated below:

89. (New) In an orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore with an anterior portion, a posterior portion having a transverse dimension smaller than a transverse dimension of the anterior portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior portion of the bore in the stabilizing element, the improvement comprising:

a resilient radially deflectable stopping member which is configured to engage a surface of the assembly and prevent the back-out of the securing element through the bore of the stabilizing element and which is slidably disposed within a groove provided within the assembly.

90. (New) The assembly of claim 89 wherein the stopping member comprises a biased collar.

91. (New) The assembly of claim 90 wherein the biased collar has a first configuration and is elastically deformable to a second configuration.

92. (New) The assembly of claim 91 wherein the second configuration is an expanded configuration.

93. (New) The assembly of claim 91 wherein the biased collar extends at least partially within the bore of the stabilizing element so that the head of the securing element is retained between anterior and posterior portions of the bore.

94. (New) In an orthopedic implant assembly which has a stabilizing element having an anterior surface, a posterior surface, and at least one bore with an anterior portion, a posterior portion having a transverse dimension smaller than a transverse dimension of the anterior portion and which has a securing element having an elongated body and an enlarged integral head with a maximum transverse dimension greater than a transverse dimension of the posterior portion of the bore in the stabilizing element, the improvement comprising:

a resilient longitudinally deflectable stopping member which is configured to engage a surface of the assembly and prevent the back-out of the securing element through the bore of the stabilizing element.

95. (New) The orthopedic implant assembly of claim 94 wherein the resilient longitudinally deflectable member is configured to deflect longitudinally when the stopping member passes by the engaged surface when advancing posteriorly through the bore of the stabilizing element.

96. (New) An orthopedic implant assembly, comprising:

- a. a stabilizing element having [an anterior surface, a posterior surface, and] at least one bore with an anterior bore portion which has a transverse dimension, a posterior bore portion which has a transverse dimension smaller than the transverse dimension of the anterior bore portion; and
- b. a biased stopping member which has a first configuration that extends within the at least one bore of the stabilizing element and reduces at least one transverse cross-sectional dimension of the bore passageway and which is elastically deformable to a second configuration which increases

the at least one transverse cross-sectional dimension reduced by the biased stopping member in the first configuration; and

- c. a securing element having an elongated body and an enlarged integral head which has a maximum transverse dimension greater than the transverse dimension of the bore passageway reduced by first configuration of the biased stopping member and greater than a transverse dimension of the posterior bore portion in the stabilizing element, so that the head of the securing element is retained between the biased stopping member and the posterior portion of the bore.

97. (New) The orthopedic implant assembly of claim 96 wherein the elastically deformed second configuration of the stopping member facilitates passage of the integral head of the securing element by the stopping member.

98. The orthopedic implant assembly of claim 97 wherein the biased stopping member elastically returns from the second configuration back to the first configuration.

99. (New) The assembly of claim 96 wherein the biased stopping member comprises a collar.

100. (New) The assembly of claim 99 wherein the biased stopping member is disposed in part within a recess of the stabilizing element.

101. (New) The assembly of claim 100 wherein the recess is a groove configured to slidably receive the biased collar.

102. (New) An orthopedic attachment member, comprising:

- a. an attachment component which has at least one bore configured to receive a securing component with an enlarged integral portion, the bore having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion;
- b. a biased stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged integral portion of a securing component within the bore of the attachment component between the stopping surface and the second bore passageway portion; and
- c. a third bore passageway portion between the biased stopping surface and the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing component received by the bore.

103. (New) The orthopedic attachment member of claim 102 wherein the biased stopping member is elastically deformable from the first configuration to a second configuration which increases the at least one transverse cross-sectional dimension reduced by the biased stopping member in the first configuration.

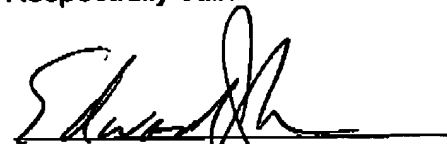
104. (New) The orthopedic attachment member of claim 103 wherein the biased stopping member is elastically deformed by the passage of an enlarged integral portion of the securing component.

105. (New) The orthopedic attachment member of clam 104 wherein the biased stopping member resiliently returns to the first configuration after passage of the enlarged integral portion of the securing component.

REMARKS

The subject matter of the new claims 89-105 is described in the present application at least in the Detailed Description Of The Invention and is shown in Figures 1-15. No new matter is introduced by these new claims. Applicants believe that the pending claims of this reissue application are directed to patentable subject matter and respectfully request prompt examination and allowance of these claims.

Respectfully submitted:



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PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number

10/620/54

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	28 minus 20 =	8
INDEPENDENT CLAIMS	4 minus 3 =	1
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

3-29-04

	(Column 1)	(Column 2)	(Column 3)
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	34	11	
Independent	5	11	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	385.00
XS 9=	
X43=	
+145=	
TOTAL	

RATE	FEE
BASIC FEE	770.00
XS18=	
X86=	
+290=	
TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

7-15-03

	(Column 1)	(Column 2)	(Column 3)
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	25	11	
Independent	2	11	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	11	11	
Independent	11	11	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐			

RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Duane Morris

DUANE MORRIS LLP
ONE MARKET, SPEAR TOWER, SUITE 2000
SAN FRANCISCO, CA 94105-1104
PHONE: 415.371.2200
FAX: 415.371.2201

RECEIVED
CENTRAL FAX CENTER

FEB 28 2006

FACSIMILE TRANSMITTAL SHEET

TO: EXAMINER DAVID O. REIP

FIRM/COMPANY: Mail Stop Amendment

FACSIMILE NUMBER: (571)-273-8300

**CONFIRMATION
TELEPHONE:**

FROM: Ruth Der, Paralegal

DIRECT DIAL: 415.371.2231

DATE: February 28, 2006

USER NUMBER:

FILE NUMBER: Atty. Docket No. R0371-00101, Serial No. 10/620,154

TOTAL # OF PAGES: 3
(INCLUDING COVERSHEET)

MESSAGE: Attached is *Status Inquiry*.

Please confirm receipt of this facsimile.

NOTE: Original will not follow

CONFIDENTIALITY NOTICE

THIS FACSIMILE TRANSMISSION IS PRIVILEGED AND CONFIDENTIAL AND IS INTENDED ONLY FOR THE REVIEW OF THE PARTY TO WHOM IT IS ADDRESSED. IF YOU HAVE RECEIVED THIS TRANSMISSION IN ERROR, PLEASE IMMEDIATELY TELEPHONE THE SENDER ABOVE TO ARRANGE FOR ITS RETURN, AND IT SHALL NOT CONSTITUTE WAIVER OF THE ATTORNEY-CLIENT PRIVILEGE.

If there is a problem with this transmission, please call us as soon as possible at 415.371.2200.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of
Talaber et al.

Examiner: David O. Reip

RECEIVED
CENTRAL FAX CENTER
FEB 28 2006

For: **ORTHOPEDIC IMPLANT ASSEMBLY**

Group: 3733

Serial No.: 10/620,154

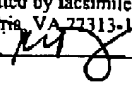
STATUS INQUIRY

Filed: July 15, 2003

Atty. Docket No.: R0372-00101

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile to Examiner David O. Reip (571) 273-8300, Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 2/28/2006 in San Francisco, CA.

By: 

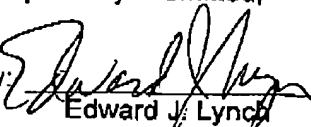
Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby inquire again into the status of the above-identified application filed July 15, 2003. The Patent Application Information Retrieval (PAIR) indicates that this application was docketed to the Group Art Unit Examiner on February 16, 2006. To date, Applicants have not received an office action from the Patent Office. The most recent communication received from the Patent Office was the Notice Of Acceptance of Power of Attorney mailed January 7, 2004 from the Patent Office.

No fees are due with this communication. The Commissioner is authorized to charge the fees due which may be required to Deposit Account No. 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this sheet is enclosed for fee processing.

Respectfully submitted,

By: 

Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of
Talaber et al.

Examiner: David O. Reip

Group: 3733

For: **ORTHOPEDIC IMPLANT ASSEMBLY**

Serial No.: 10/620,154

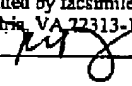
Filed: July 15, 2003

STATUS INQUIRY

Atty. Docket No.: R0372-00101

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence is being transmitted by facsimile to Examiner David O. Reip (571) 273-8300, Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 2/28/2006 in San Francisco, CA.

By: 

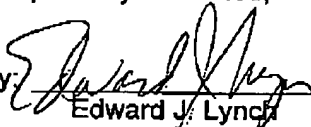
Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby inquire again into the status of the above-identified application filed July 15, 2003. The Patent Application Information Retrieval (PAIR) indicates that this application was docketed to the Group Art Unit Examiner on February 16, 2006. To date, Applicants have not received an office action from the Patent Office. The most recent communication received from the Patent Office was the Notice Of Acceptance of Power of Attorney mailed January 7, 2004 from the Patent Office.

No fees are due with this communication. The Commissioner is authorized to charge the fees due which may be required to Deposit Account No. 04-1679, referencing Atty. Docket No. R0372-00101. A duplicate copy of this sheet is enclosed for fee processing.

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

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COPY



IFW

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

) Examiner: Not yet assigned

) Group Art Unit: 3731

) Atty. Docket No.: R0372-00101

TRANSMITTAL

Filed: July 15, 2003

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this paper is being deposited in the United States mail as first class mail with postage prepaid, and is addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 5/12/2005 in San Francisco, CA.

By: [Signature]

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are

X Status Inquiry;

X Self stamped return receipt postcard.

2. Payment of Fees

X No fees are due with this communication; however, the Commissioner is authorized to charge any deficiency of fees and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. **A duplicate copy of this transmittal is enclosed for this purpose.**

Respectfully submitted,

By: [Signature]

Edward J. Lynch
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Filed: July 15, 2003

Examiner: Not yet assigned

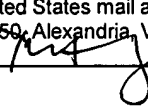
Group Art Unit: 3731

Atty. Docket No.: R0372-00101

STATUS INQUIRY

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this paper is being deposited in the United States mail as first class mail with postage prepaid, and is addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 5/12/2005 in San Francisco, CA.

By: 

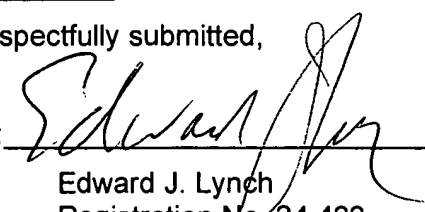
Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants hereby inquire into the status of the above-identified reissue application, which was filed with the U.S. Patent and Trademark Office on July 15, 2003. The last communication received by Applicants from the Patent Office was the Notice Of Acceptance Of Power Of Attorney and the Updated Filing Receipt mailed January 7, 2004. To date, Applicants have not received an Office Action in this application.

No fee is due with this communication; however, should the Commissioner find otherwise, the Commissioner is authorized to charge any deficiency in fees which may be required and to credit any overpayment under 37 C.F.R. §1.16 and §1.17 to Deposit Account No. 04-1679, referencing Atty. Docket No. R0372-00101.

Respectfully submitted,

By: 

Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

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PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number

10/620154

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	28 minus 20 =	8
INDEPENDENT CLAIMS	4 minus 3 =	1
MULTIPLE DEPENDENT CLAIM PRESENT ☐		

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

3-29-04

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* 34	Minus	** 11	=
	Independent	* 5	Minus	*** 11	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY TYPE ☐ OR

OTHER THAN SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL		OR	TOTAL	

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

7-15-03

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	* 25	Minus	** 11	=
	Independent	* 2	Minus	*** 11	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Reissue Application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Filed: July 15, 2003

Examiner: Not yet assigned

Group Art Unit: 3731

Attorney Docket No.: R0372.00101

SECOND PRELIMINARY AMENDMENT

Express Mail Label No.: ER 494010875 US

Mailed on: March 29, 2004

**Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

SECOND PRELIMINARY AMENDMENT

Dear Sirs:

Please preliminarily amend the above identified reissue application as follows.

IN THE CLAIMS

Please add new claims 63-88 as indicated below:

PENDING CLAIMS

63. (New) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior portion, a posterior portion with a transverse dimension smaller than a transverse dimension of the anterior portion; and
 - b. a stopping member which is at least partially disposed within the bore of the stabilizing element, which defining at least in part a reversibly expandable passageway having a first transverse configuration with a transverse dimension that is smaller than a transverse dimension of the anterior portion of the bore of the stabilizing element and a second transverse configuration with a transverse dimension larger than the transverse dimension of the first configuration;
 - c. a securing element having an elongated body and a head which has a maximum transverse dimension greater than the transverse dimension of the first configuration of the stopping member passageway and greater than a transverse dimension of the posterior portion of the bore in the stabilizing element, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension in the posterior portion of the bore.

64. (New) The intracorporeal medical device of claim 63 wherein the stopping surface is configured to prevent the back-out of the second component through the bore of the first component.

65. (New) The assembly of claim 63 wherein the stopping member is biased to the first configuration.

66. (New) The assembly of claim 65 wherein the stopping member comprises a biased collar.

67. (New) The assembly of claim 63 wherein the head of the securing element has a curved posterior surface.

68. (New) The assembly of claim 66 wherein the bore has a groove in an anterior portion configured to receive the biased collar, and wherein the biased collar is configured to be reversibly expandable when seated in the groove.

69. (New) The assembly of claim 67 wherein the head of the securing element has a curved posterior surface and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through a passageway of the collar.

70. (New) The assembly of claim 69 wherein the head of the securing element has a curved posterior surface which has a minimum transverse dimension smaller than the transverse dimension of the passageway of the unexpanded collar, and which is configured to contact the collar anterior surface and deflect the collar away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.

71. (New) The assembly of claim 66 wherein the collar has an anterior surface which tapers toward the collar passageway.

72. (New) The assembly of claim 71 wherein a posterior bore portion is curved and configured to receive the curved posterior surface of the head.

73. (New) The assembly of claim 63 wherein the head of the securing element is longitudinally displaceable between a posterior surface of the stopping member and the posterior portion of the bore of the stabilizing element.

74. (New) The assembly of claim 10 wherein the body of the securing element has a transverse dimension smaller than the transverse dimension of the posterior portion of the bore of the stabilizing element, and wherein the securing element may be angularly displaced within the posterior portion of the bore of the stabilizing element.

75. (New) The assembly of claim 1 wherein the stabilizing element includes at least two bores.

76. (New) The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

77. (New) The assembly of claim 13 wherein the stabilizing element has a curved posterior surface.

78. (New) The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

79. (New) The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

80. (New) The assembly of claim 3 wherein the collar is formed of an elastically deformable material.
81. (New) The assembly of claim 3 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.
82. (New) The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.
83. (New) The assembly of claim 5 wherein the collar has a height less than the height of the groove.
84. (New) An orthopedic implant assembly, comprising:
- a. a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having an anterior portion, a posterior portion with a transverse dimension smaller than a transverse dimension of the anterior portion, and a stopping member at the anterior portion of the bore;
and
 - b. a securing element having an elongated body and a head secured to the body which is reversibly compressible with a compressed transverse dimension less than the transverse dimension of the anterior portion of the bore and with an uncompressed transverse dimension greater than an inner transverse dimension of the stopping member and the posterior portion of the bore, so that the head of the securing element is retained between the stopping member and the smaller transverse dimension of the posterior portion of the bore of the stabilizing element.

85. (New) The implant assembly of claim 84 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

86. (New) The implant assembly of claim 84 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

87. (New) The assembly of claim 84 wherein the stopping member is in the anterior portion of the bore.

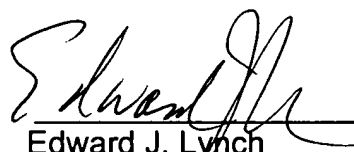
88. (New) The assembly of claim 84 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the bore.

REMARKS

Applicants have included herewith a PTO-1449 form listing additional references for consideration by the Examiner. Copies of the references not previously considered by the Examiner in the parent application which issued as U.S. Patent No. 6,261,291 are enclosed herewith.

Applicants believe that the pending claims of this reissue application are directed to patentable subject matter and respectfully request examination and allowance of these claims.

Respectfully submitted:



Edward J. Lynch
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Attorney for Applicant

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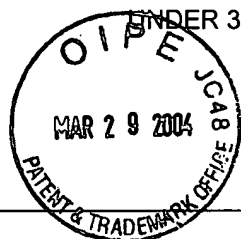
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

SHEET 1 OF 2



ATTORNEY DOCKET NO.:

R0372-00101

SERIAL NO.:

10/620,154

APPLICANTS:

Talaber et al.

EXAMINER

Not yet assigned

FILING DATE:

July 15, 2003

GROUP ART UNIT:

3731

U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
	*A1	3,350,103	10/67	Ahlstone		
	*A2	3,863,959	2/75	Blaschke		
	*A3	4,017,946	4/77	Soja		
	*A4	4,280,742	7/81	Justman		
	*A5	4,488,543	12/84	Tornier		
	*A6	4,662,461	5/87	Garrett		
	*A7	4,696,290	9/87	Steffee		
	*A8	5,054,347	10/91	Johnson et al.		
	*A9	5,169,597	12/92	Davidson et al.		
	*A10	5,275,601	1/94	Gogolewski et al.		
	*A11	5,364,399	11/94	Lowery et al.		
	*A12	5,372,660	12/94	Davidson et al.		
	*A13	5,509,933	4/96	Davidson et al.		
	*A14	5,520,690	5/96	Errico et al.		
	*A15	5,534,032	7/96	Hodorek		
	*A16	5,569,251	10/96	Baker et al.		
	*A17	5,578,034	11/96	Estes		
	*A18	5,601,552	2/97	Trebing et al.		
	*A19	5,607,426	3/97	Ralph et al.		
	*A20	5,643,265	7/97	Errico et al.		
	*A21	5,725,588	3/98	Errico et al.		
	*A22	5,735,853	4/98	Olerud		
	*A23	5,785,711	7/98	Errico et al.		
	*A24	5,807,396	9/98	Ravch		
	*A25	5,810,819	9/98	Errico et al.		
	*A26	5,843,082	12/98	Yuan et al.		
	*A27	5,876,402	3/99	Errico et al.		
	*A28	5,879,389	3/99	Koshino		
	*A29	5,904,683	5/99	Pohndorf		
	*A30	5,928,243	7/99	Guyer		
	*A31	5,935,133	8/99	Wagner et al.		
	*A32	5,961,518	10/99	Errico et al.		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.:

SERIAL NO.:

R0372-00101

10/620,154

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

SHEET 2 OF 2

APPLICANTS:

Talaber et al.

EXAMINER

Not yet assigned

FILING DATE:

July 15, 2003

GROUP ART UNIT:

3731

U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (If appropriate)
	*A33	5,964,769	10/99	Wgner et al.		
	*A34	5,989,250	11/99	Wagner et al.		
	*A35	5,997,539	12/99	Errico et al.		
	*A36	6,017,344	1/00	Errico et al.		
	*A37	6,030,389	2/00	Wagner et al.		
	*A38	6,045,579	4/00	Hochshuler et al.		
	*A39	6,053,921	4/00	Wagner et al.		
	*A40	6,117,173	9/00	Taddia et al.		
	A41	6,139,550	10/00	Michelson		
	A42	6,193,721	2/01	Michelson		
	A43	6,342,055	1/02	Eiserman		
	A44	6,398,783	6/02	Michelson		
	A45	6,620,163	9/03	Michelson		

FOREIGN PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	COUNTRY	TRANSLATION (YES/NO)	
	*B1	DE 4409833 A1	10/95	Germany		
	*B2	DE 19545612 A1	6/97	Germany		
	*B3	WO 98/17188	4/98	PCT		
	*B4	WO 98/48739	11/98	PCT		
	*B5	WO 99/00904	3/99	PCT		

EXAMINER'S SIGNATURE

DATE CONSIDERED

† EXAMINER:

Initial if reference is considered, whether or not citation is in conformance with MPEP 609.

Line through citation if not in conformance and not considered.

Include copy of this form in next communication to applicant.

* If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120. 37 C.F.R. 1.98(d).



03-30-04

3731

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Examiner: Not yet assigned

Group Art Unit: 3731

Atty. Docket No.: R0372-00101

TRANSMITTAL

Filed: July 15, 2003

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450Express Mail Label No.: ER 494010875 USMailed on: March 29, 2004

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are:

- ☒ Second Preliminary Amendment;
☒ Information Disclosure Statement;
☒ Form PTO-1449 and copy of 1 cited reference;
☒ Self-stamped return receipt postcard.

2. Claims Fee Calculation

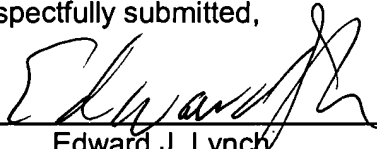
Description	Fee Code	Claims	Extra	Rate	Fee
Independent Claims	1204	12 - 10 =	2 x	\$86=	\$ 172
Total Claims	1205	80 - 62 =	22 x	\$18=	\$ 396

Total Filing Fees Due \$568

3. Payment of Fees

- ☒ The Commissioner is authorized to charge any fees and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. **A duplicate copy of this transmittal is enclosed.**

Respectfully submitted,

By: Edward J. Lynch
Registration No. 24,422
Attorney for ApplicantsDuane Morris LLP
One Market, Spear Tower, Suite 2000
San Francisco, CA 94105
Telephone: (415) 371-2200
Facsimile: (415) 371-2201
Direct Dial: (415) 371-2267



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/620,154	07/15/2003	David J. Talaber	R0372-00101

Edward J Lynch
 Duane Morris LLP
 One Market
 Spear Tower Suite 2000
 San Francisco, CA 94105

CONFIRMATION NO. 8486



OC000000011596477

Date Mailed: 01/07/2004

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 10/17/2003.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

ROXANNE N RAWLS
 OIPE (703) 308-9481

OFFICE COPY



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Filed: July 15, 2003

) Examiner: Not yet assigned

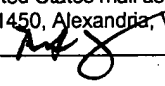
) Group Art Unit: 3731

) Atty. Docket No.: R0372-00101

INFORMATION
DISCLOSURE STATEMENT

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this paper is being deposited in the United States mail as first class mail with postage prepaid, and is addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 11/5/03 in San Francisco, CA.

By: 

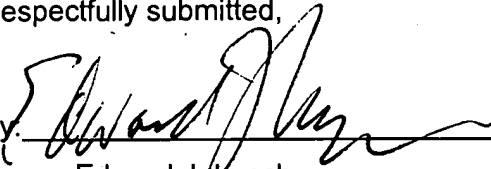
Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicants wish to bring to the attention of the Patent Office the references listed on the attached PTO-1449 form and request that they be considered by the Examiner. The references cited on the attached were cited by or submitted to the Patent Office in the parent issued patent U.S. Patent No. 6,261,291, application Serial No. 09/349,519, filed July 8, 1999 are designated as such.

This request is being submitted under 37 C.F.R. §1.97(b)(3), therefore no fee is due. The Commissioner is authorized to charge any deficiency in fees and to credit any overpayment which may be required in connection with this paper under 37 CFR §§ 1.16 and 1.17 to Deposit Account NO. 04-1679, referencing Atty. Docket No. R0372-00101.

Respectfully submitted,

By: 

Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

DUANE MORRIS LLP
One Market, Spear Tower, Ste. 2000
San Francisco, CA 94109
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

SHEET 1 OF 2

ATTORNEY DOCKET NO.:

R0372-00101

SERIAL NO.:

10/620,154

APPLICANTS:

Talaber et al.

EXAMINER

Not yet assigned

FILING DATE:

July 15, 2003

GROUP ART UNIT:

3731

U.S. PATENT DOCUMENTS

† EX'R INITIAL	* REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (If appropriate)
	*A1	3,350,103	10/67	Ahlstone		
	*A2	3,863,959	2/75	Blaschke		
	*A3	4,017,946	4/77	Soja		
	*A4	4,280,742	7/81	Justman		
	*A5	4,488,543	12/84	Tornier		
	*A6	4,662,461	5/87	Garrett		
	*A7	4,696,290	9/87	Steffee		
	*A8	5,054,347	10/91	Johnson et al.		
	*A9	5,169,597	12/92	Davidson et al.		
	*A10	5,275,601	1/94	Gogolewski et al.		
	*A11	5,364,399	11/94	Lowery et al.		
	*A12	5,372,660	12/94	Davidson et al.		
	*A13	5,509,933	4/96	Davidson et al.		
	*A14	5,520,690	5/96	Errico et al.		
	*A15	5,534,032	7/96	Hodorek		
	*A16	5,569,251	10/96	Baker et al.		
	*A17	5,578,034	11/96	Estes		
	*A18	5,601,552	2/97	Trebing et al.		
	*A19	5,607,426	3/97	Ralph et al.		
	*A20	5,643,265	7/97	Errico et al.		
	*A21	5,725,588	3/98	Errico et al.		
	*A22	5,735,853	4/98	Olerud		
	*A23	5,785,711	7/98	Errico et al.		
	*A24	5,807,396	9/98	Ravch		
	*A25	5,810,819	9/98	Errico et al.		
	*A26	5,843,082	12/98	Yuan et al.		
	*A27	5,876,402	3/99	Errico et al.		
	*A28	5,879,389	3/99	Koshino		
	*A29	5,904,683	5/99	Pohndorf		
	*A30	5,928,243	7/99	Guyer		
	*A31	5,935,133	8/99	Wagner et al.		
	*A32	5,961,518	10/99	Errico et al.		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.:

SERIAL NO.:

INFORMATION DISCLOSURE STATEMENT

UNDER 37 CFR §1.56, §1.97, and §1.98

PTO-1449 FORM

R0372-00101

10/620,154

APPLICANTS:

EXAMINER

Talaber et al.

Not yet assigned

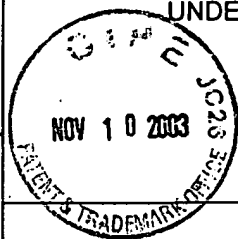
FILING DATE:

GROUP ART UNIT:

July 15, 2003

3731

SHEET 2 OF 2



U.S. PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	NAME	U.S. CLASS/ SUBCLASS	FILING DATE (if appropriate)
	*A33	5,964,769	10/99	Wgner et al.		
	*A34	5,989,250	11/99	Wagner et al.		
	*A35	5,997,539	12/99	Errico et al.		
	*A36	6,017,344	1/00	Errico et al.		
	*A37	6,030,389	2/00	Wagner et al.		
	*A38	6,045,579	4/00	Hochshuler et al.		
	*A39	6,053,921	4/00	Wagner et al.		
	*A40	6,117,173	9/00	Taddia et al.		
	A41	6,139,550	10/00	Michelson		
	A42	6,193,721	2/01	Michelson		
	A43	6,398,783	6/02	Michelson		
	A44	6,620,163	9/03	Michelson		

FOREIGN PATENT DOCUMENTS

† EX'R INITIAL	*REF. #	PATENT NUMBER	DATE (MO/YR)	COUNTRY	TRANSLATION (YES/NO)	
	*B1	DE 4409833 A1	10/95	Germany		
	*B2	DE 19545612 A1	6/97	Germany		
	*B3	WO 98/17188	4/98	PCT		
	*B4	WO 98/48739	11/98	PCT		
	*B5	WO 99/00904	3/99	PCT		

OTHER DOCUMENTS

† EX'R INITIAL	*REF. #	Document Description (including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER'S SIGNATURE

DATE CONSIDERED

† EXAMINER:

Initial if reference is considered, whether or not citation is in conformance with MPEP 609.

Line through citation if not in conformance and not considered.

Include copy of this form in next communication to applicant.

* If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120. 37 C.F.R. 1.98(d).



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue application for

Patent No.: 6,261,291 ~~X~~

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

For: **ORTHOPEDIC IMPLANT
ASSEMBLY**

Examiner: Not yet assigned

Group Art Unit: 3731

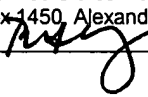
Atty. Docket No.: R0372-00101

TRANSMITTAL

Filed: July 15, 2003

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this paper is being deposited in the United States mail as first class mail with postage prepaid, and is addressed to Mail Stop Reissue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 11/5/03 in San Francisco, CA.

By: 

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. Transmitted herewith for filing in the above-identified patent application are

- ☒ Information Disclosure Statement;
- ☒ Form PTO-1449; and
- ☒ Self-stamped return receipt postcard.

2. Payment of Fees

- ☒ No fees are due with this communication.
- ☒ The Commissioner is authorized to charge any fees and to credit any overpayment of fees which may be required under 37 C.F.R. §1.16 or §1.17, to Deposit Account No 04-1679, referencing Atty. Docket No. R0372-00101. **A duplicate copy of this transmittal is enclosed.**

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

Duane Morris LLP
One Market, Spear Tower, Suite 2000
San Francisco, CA 94105
Telephone: (415) 371-2200
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PATENT

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Patent No.: 6,261,291

Issued: July 17, 2001

Inventors: Talaber et al.

Reissue Serial No.: 10/620,154

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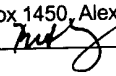
) Examiner: Not yet assigned

) Group Art: 3731

) Atty. Docket No.: R0372-00101

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

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By: 

**NOTIFICATION OF ERROR IN PAYMENT OF FEE(S) AS A SMALL ENTITY
(37 C.F.R. §1.28(c))**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

On July 15, 2003, a small entity assertion was erroneously filed with this reissue patent application. This assertion of small entity status in this application and the payment of fees as a small entity were made in good faith, but it has now been discovered that such status as a small entity was in error.

10/23/2003 SLUANG1 00000027 041679 10620154

01 FC:1004 770.00 DA
02 FC:1204 258.00 DA
03 FC:1205 612.00 DA

10/23/2003 SLUANG1 00000028 041679 10620154

01 FC:1204 258.00 DA

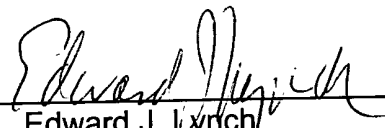
Itemization of the Fee(s) Erroneously Paid as Small Entity

<u>FEES ERRONEOUSLY PAID AS A SMALL ENTITY</u>	<u>FEE ACTUALLY PAID AS A SMALL ENTITY</u>	<u>DEFICIENCY OWED</u>
Filing fee paid on July 15, 2003	\$375.00	\$375.00
Fee for excess claims (over 20) paid on July 15, 2003	\$306.00	\$306.00
Fee for excess independent claims (over 3) paid on July 15, 2003	\$252.00	\$252.00

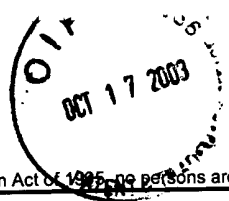
The total deficiency owed is paid as follows:

The Commissioner is authorized to charge the amount of \$ 933.00 and any additional fees required by this paper or credit any overpayment in the manner authorized herein to Deposit Account No. 04-1679, referencing Atty. Docket No. R0372-00101. **A duplicate of this paper is attached.**

Respectfully submitted,

By: 
Edward J. Lynch
Registration No. 24,422
Attorney for Applicants

DUANE MORRIS LLP
One Market
Spear Tower, Suite 2000
San Francisco, CA 94105
Telephone: (415) 371-2200
Facsimile: (415) 371-2201
Direct Dial: (415) 371-2267



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE APPLICATION DECLARATION BY THE INVENTOR

Docket Number (Optional)

R0372.00101

I her. by declare that:

Each inventor's residence, mailing address and citizenship are stated below next to their name.

I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number 6,261,291, granted July 17, 2001 and for which a reissue patent is sought on the invention entitled _____,ORTHOPEDIC IMPLANT ASSEMBLY

the specification of which

☒ is attached hereto.☒ was filed on July 15, 2003 as reissue application number 10/620,154and was amended on _____
(If applicable)

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

☐ I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/02B (or equivalent) listing the foreign applications.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

☐ by reason of a defective specification or drawing.☐ by reason of the patentee claiming more or less than he had the right to claim in the patent.☐ by reason of other errors.

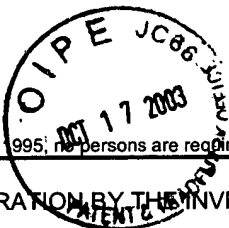
At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening:

The new claim 29 is broader than issued claims 1 and 23 of the U.S. Patent No. 6,261,291 in several aspects. New Claim 29 is directed to an attachment member that has an "attachment component" which does not require "an anterior surface" and "a posterior surface" as required by the issued claims. Moreover, the new claim 29 includes a "stopping surface" which does not require "a biased stopping member" as set forth in the issued claims. Additionally, new claim 29 does not positively include a securing member.

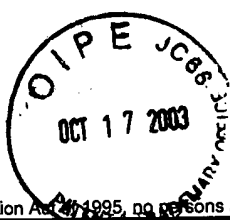
[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **C mmissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)				Docket Number (Optional) R0372.00101	
All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.					
Note: To appoint a power of attorney, use form PTO/SB/81.					
Correspondence Address: Direct all communications about the application to:					
☐ Customer Number:					
OR					
☒ Firm or Individual Name	Edward J. Lynch				
Address	Duane Morris LLP				
Address	One Market, Spear Tower, Ste. 2000				
City	San Francisco	State	CA	Zip	94105
Country	U.S.				
Telephone	(415) 371-2267	Fax	(415) 371-2201		
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.					
Full name of sole or first inventor (given name, family name) David J. Talaber					
Inventor's signature <i>David J. Talaber</i>		Date 9/29/03			
Residence 5185 Charlotte Way, Livermore, CA 94550		Citizenship U.S.			
Mailing Address Same					
Full name of second joint inventor (given name, family name) James R. Lloyd					
Inventor's signature <i>James R. Lloyd</i>		Date 10/1/03			
Residence 1080 Circle Dr., Elm Grove, WI 53122		Citizenship U.S.			
Mailing Address Same					
Full name of third joint inventor (given name, family name)					
Inventor's signature		Date			
Residence		Citizenship			
Mailing Address					
☐ Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.					

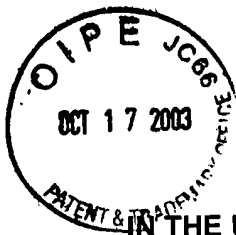


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CONSENT OF ASSIGNEE TO REISSUE, POWER OF ATTORNEY AND STATEMENT UNDER 37 C.F.R. 1.373(b)		Docket Number (Optional) R0372.00101
This is part of the application for a reissue patent based on the original patent identified below.		
Name of Patentee(s) TALABER ET AL.		
Patent Number 6,261,291	Date Patent Issued July 17, 2001	
Title of Invention ORTHOPEDIC IMPLANT ASSEMBLY		
1. ☒ Filed herein is a statement under 37 CFR 3.73(b). (Form PTO/SB/96) Statement of Ownership: Assignee Acantha LLC is the holder of all right, title and interest in the U.S. Pat. No. 6,261,291 by virtue of assignment recorded on June 4, 2002 at reel/frame 012967/0893. 2. ☐ Ownership of the patent is in the inventor(s), and no assignment of the patent is in effect. One of boxes 1 or 2 above must be checked. If multiple assignees, complete this form for each assignee. If box 2 is checked, skip the next entry and go directly to "Name of Assignee". The written consent of all assignees and inventors owning an undivided interest in the original patent is included in this application for reissue.		
The assignee(s) owning an undivided interest in said original patent is/are <u>Acantha LLC</u> , and the assignee(s) consents to the accompanying application for reissue.		
Name of assignee/inventor (if not assigned) Acantha LLC		
Signature <i>David J. Talaber</i>	Date <i>9/29/03</i>	
Typed or printed name and title of person signing for assignee (if assigned) David J. Talaber, President <i>Managing Member</i> <i>9/29/03</i>		

This collection of information is required by 37 CFR 1.172. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commission r for Patents, P.O. B x 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

Talaber et al.

For: **ORTHOPEDIC IMPLANT ASSEMBLY**

Serial No.: 10/620,154

Filed: July 15, 2003

Atty. Docket No.: R0372.00101

Examiner: Not yet assigned

Group Art: 3731

CERTIFICATE OF MAILING PURSUANT TO 37 CFR 1.8

I hereby certify that this paper is being deposited in the United States mail as first class mail with postage prepaid, and is addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 10/13/03 in San Francisco, CA.

By: [Signature]

POWER OF ATTORNEY BY ASSIGNEE AND REVOCATION OF PRIOR POWERS

Mail Stop MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As Assignee of the entire interest of the above-identified patent application, all powers of attorney previously given are hereby revoked and the following attorneys are hereby appointed to prosecute and transact all business in the Patent and Trademark Office in connection with the above-identified application.

<u>Attorney/Agent</u>	<u>Reg. No</u>	<u>Attorney/Agent</u>	<u>Reg. No.</u>
Edward J. Lynch	24,422	L. Howard Chen	44,615
Mark C. Comtois	46,285	L. Lawton Rogers, III	24,302
D. Joseph English	42,514	Patrick D. McPherson	46,255

of the firm

DUANE MORRIS LLP
One Market
Spear Tower, Suite 2000
San Francisco, CA 94105
(415) 371-2200

and

GEORGE M. COOPER, Registration No. 20,201
ERIC S. SPECTOR, Registration No. 22,495
FELIX J. D'AMBROSIO, Registration No. 25,721
DOUGLAS R. HANSCOM, Registration No. 26,600
JIM W. HELLWEGE, Registration No. 28,808
WILLIAM A. BLAKE, Registration No. 30,548
COLIN D. BARNITZ, Registration No. 35,061
JENNIFER P. YANCY, Registration No. 47,003
ALEXANDER D. RARING, Registration No. 52,502

of the firm:

JONES, TULLAR & COOPER, P.C.
2001 Jefferson Davis Highway
Box 2266, EADS Station
Arlington, VA 22202
(703) 415-1500

Address all correspondence and direct all telephone calls to:

Edward J. Lynch
Duane Morris LLP
One Market
Spear Tower, Ste. 2000
San Francisco, CA 94105
Direct Dial: (415) 371-2267

The above-identified application is copending Serial No. 09/349,519, of which a copy of the assignment is enclosed. The assignment is recorded at reel 012967 and frame 0893.

Respectfully submitted,

Signature: David J. Talaber

Name: David J. Talaber

Title: President *Managing Member*

Date: 9/29/03



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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/620,154	07/15/2003	David J. Talaber	09617.1001

CONFIRMATION NO. 8486

Duane Morris LLP
 One Market
 Spear Tower Suite 2000
 San Francisco, CA 94105

FORMALITIES LETTER



OC000000010789985

Date Mailed: 08/29/2003

NOTICE TO FILE MISSING PARTS OF REISSUE APPLICATION

Filing Date Granted

An application number and filing date have been accorded to this reissue application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.
- Consent of the assignee is present, but is unsigned. A statement of consent bearing the signature of an official authorized to act on behalf of the assignee(s) must be provided, to comply with 37 CFR 1.172.
- Assignee's statement under 37 CFR 3.73(b) is present, but is unsigned. A 37 CFR 3.73(b) statement bearing the signature of an official authorized to act on behalf of the assignee must be provided.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **\$65** for a Small Entity

- **\$65** Late oath or declaration Surcharge.

*A copy of this notice **MUST** be returned with the reply.*

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PART 3 - OFFICE COPY

REISSUE PATENT APPLICATION TRANSMITTAL

Address to:

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attorney Docket No.	09617.1001
First Named Inventor	Talaber et al.
Original Patent Number	6,261,291
Original Patent Issue Date (Month/Day/Year)	07/17/2001
Express Mail Label No.	ER 203737890 us

APPLICATION FOR REISSUE OF:

(Check applicable box)



Utility Patent



Design Patent



Plant Patent

APPLICATION ELEMENTS (37 CFR 1.173)

1. ☒ Fee Transmittal Form (PTO/SB/56)
(Submit an original, and a duplicate for fee processing)
2. ☒ Applicant claims small entity status. See 37 CFR 1.27.
3. ☒ Specification and Claims in double column copy of patent
format (amended, if appropriate)
4. ☒ Drawing(s) (proposed amendments, if appropriate)
5. ☒ Reissue Oath/Declaration (original or copy) UNSIGNED
(37 C.F.R. § 1.175) (PTO/SB/51 or 52)
6. ☒ Power of Attorney UNSIGNED
7. Original U.S. Patent currently assigned? ☒ Yes ☐ No
(If Yes, check applicable box(es))
 - ☒ Written Consent of all Assignees (PTO/SB/53) UNSIGNED
 - ☒ 37 C.F.R. § 3.73(b) Statement UNSIGNED
(PTO/SB/96)
8. ☐ CD-ROM or CD-R in duplicate, Computer Program (Appendix)
or large table
9. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all of the following are necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i ☐ CD-ROM (2 copies) or CD-R (2 copies); or
 - ii ☐ paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

10. ☐ Statement of status and support for all changes
to the claims. See 37 CFR 1.173 (c).
11. ☐ Original U.S. Patent for surrender
 - ☐ Ribbioned Original Patent Grant
 - ☐ Statement of Loss (PTO/SB/55)
12. ☐ Foreign Priority Claim (35 U.S.C. 119)
(if applicable)
13. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS
Citations
14. ☐ English Translation of Reissue Oath/Declaration
(if applicable)
15. ☒ Preliminary Amendment
16. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
17. Other: Offer to submit original
Letters Patent

18. CORRESPONDENCE ADDRESS



Customer Number or Bar Code Label

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or ☒ Correspondence address below

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NAME (Print/Type)

Edward J. Lynch

Registration No. (Attorney/Agent)

24,422

Signature

Edward J. Lynch

Date

July 15, 2003

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15866 U.S. PTO
07/15/03

PTO/SB/56 (04-01)

Approved for use through 01/31/2004. OMB 0651-0033

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REISSUE APPLICATION FEE TRANSMITTAL FORM

Docket Number (Optional)

09617.1001

Claims as Filed - Part 1

Claims in Patent		Number Filed in Reissue Application	(3) Number Extra	Small Entity		Other than a Small Entity	
				Rate	Fee	Rate	Fee
(A) 28	Total Claims (37 CFR 1.16(j))	(B) 62	**** 34 =	x \$ 9 =	306.00	or	x \$ =
(C) 4	Independent claims (37 CFR 1.16(i))	(D) 10	* 6 =	x \$ 42 =	252.00		x \$ =
Basic Fee (37 CFR 1.16(h))					\$ 375.00		
Total Filing Fee					\$ 933.00	OR	\$

Claims as Amended - Part 2

	(1) Claims Remaining After Amendment		(2) Highest Number Previously Paid For	(3) Extra Claims Present	Small Entity		Other than a Small Entity	
					Rate	Fee	Rate	Fee
Total Claims (37 CFR 1.16(j))	***	MINUS	**	* =	x \$ =		x \$ =	
Independent Claims (37 CFR 1.16(i))	***	MINUS	*****	=	x \$ =		x \$ =	
Total Additional Fee					\$	OR	\$	

* If the entry in (D) is less than the entry in (C), Write "0" in column 3.

** If the "Highest Number of Total Claims Previously Paid For" is less than 20, Write "20" in this space.

*** After any cancellation of claims.

**** If "A" is greater than 20, use (B - A); if "A" is 20 or less, use (B - 20).

***** "Highest Number of Independent Claims Previously Paid For" or Number of Independent Claims in Patent (C).

☒ Applicant claims small entity status. See 37 CFR 1.27.

☒ Please charge Deposit Account No. 04-1679 in the amount of 933.00.
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any additional fees under 37 CFR 1.16 or 1.17 which may be required, or credit any overpayment to Deposit Account No. 04-1679.
A duplicate copy of this sheet is enclosed.

☐ A check in the amount of \$ _____ to cover the filing / additional fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

July 15, 2003
Date


Signature of Applicant, Attorney or Agent of Record
Edward J. Lynch, Reg. No. 24,422
Typed or printed name

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APPLICATION

of

David J. Talaber

James R. Lloyd

for

UNITED STATES LETTERS PATENT

on

ORTHOPEDIC IMPLANT ASSEMBLY

Atty. Docket No.: 9617.1001

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ORTHOPEDIC IMPLANT ASSEMBLY

BACKGROUND OF THE INVENTION

This invention generally relates to the field of medical devices, and particularly to an orthopedic implant for joining bone segments and methods of use thereof.

A variety of medical conditions may necessitate the joining of bone segments together, as for example, in the treatment of broken bones, spinal disorders, or the fusion of vertebrae following the removal of a spinal disk. Orthopedic implants used to join bone segments include rods, plates, and screws. In the case of rods and plates, the implants have been attached to the bone using a variety of methods including cementing and screwing the implant to the bone. The bone is typically drilled out to receive the screw therein, or to receive an anchor having a hollow shank which fixedly receives the screw therein. However, one disadvantage has been the tendency of the implants to loosen or detach from the bone over time.

It would be a significant advance to provide an orthopedic implant for joining bone segments together which durably and securely attaches to the bone.

SUMMARY OF THE INVENTION

This invention is directed to an orthopedic implant assembly generally comprising a stabilizing element, a securing element which attaches the stabilizing element to the patient's bone, and a stopping member in the stabilizing element which defines at least in part a passageway and which inhibits or prevents the securing element from loosening or backing out of the bone.

The stabilizing element is generally a plate or rod, which has at least one bore therein having a first opening in the anterior surface of the stabilizing element, a second opening in the posterior surface of the stabilizing element, and a transverse passageway extending from the first opening to the second opening. The term posterior should be understood to mean an inner portion of the assembly closer to the bone to which the assembly is attached, and the term anterior should be understood to mean an outer portion of the assembly farther away from the bone.

In one embodiment, the stopping member defines a reversibly expandable passageway, and is biased to the unexpanded, or smaller diameter, passageway configuration. In one embodiment, the biased stopping member comprises an annular collar having a reversibly expandable inner diameter. The biased stopping member may be configured to be positioned in a groove in the transverse passageway after the securing element is in place in the transverse passageway of the stabilizing element. Alternatively, in a presently preferred embodiment, the biased stopping member is configured to allow the securing element to pass posteriorly through the stopping member passageway from the anterior surface of the stabilizing element into a posterior section of the transverse passageway. In another embodiment, the biased stopping member is secured to the stabilizing element within the transverse passageway, and is deflectable. The deflectable stopping member reversibly flexes as the head of the securing element is posteriorly displaced through the deflectable stopping member to expand the passageway defined by the stopping member. The deflectable stopping member is biased to the undeflected or smaller diameter passageway configuration. The stopping member prevents the securing element from anteriorly backing out of the posterior section of the transverse passageway. As a result, the securing element durably attaches the stabilizing element to the bone.

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The securing element is configured to attach to bone, and generally comprises an elongated body and a head at one end of the body and integral therewith. The term integral should be understood to mean the securing element is a one-piece unit, with the head secured to the body so that there is no relative movement between the head and the body. In one embodiment, the securing element is selected from the group consisting of screws, pins, and nails. In a presently preferred embodiment where the collar is seated within the groove in the stabilizing element before the securing element is advanced therein, the head of the securing element has a shaped posterior surface which contacts the collar and gradually expands the collar as the head is displaced into the posterior section of the transverse passageway of the stabilizing element. In a presently preferred embodiment, the head of the securing element has a curved posterior surface. However, other suitable shapes may be used including tapered posterior surfaces.

The invention also includes methods of attaching an orthopedic implant assembly to a bone of a patient. The bone is typically prepared for receiving the body of the securing element, as for example by drilling a cavity into the bone, and/or tapping the cavity. A method generally comprises positioning the posterior surface of the stabilizing element against the surface of the bone, with the stopping member within the groove of the stabilizing element in the unexpanded configuration, introducing the body of the securing element into the transverse passageway, posteriorly displacing the head of the securing element through the stopping member and thereby expanding the stopping member, and attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the stopping member contracts and returns to a smaller transverse, i.e., unexpanded diameter, configuration. The head of the securing element is positioned within a posterior section of the transverse passageway between the stopping member and the second opening in the stabilizing element, and the body of the securing element is positioned within the patient's bone. In an alternative embodiment, the stopping member may be placed within the groove after the head of the securing element is positioned within the posterior section of the transverse passageway. The stabilizing element is attached to the bone by the securing element, which is attached to the bone and retained within the transverse passageway.

In another embodiment of the invention, the head of the securing element can be reversibly compressed, and the stopping member is secured to an anterior section of the transverse passageway. The stopping member defines a passageway with a fixed diameter, but the compressed configuration of the head of the securing element has a diameter less than the diameter of the stopping member so that the head can pass through the stopping member passageway. In the uncompressed configuration, the head of the securing element has a diameter larger than the diameter of the stopping member and the diameter of the second opening in the stabilizing element, so that the head can be advanced posteriorly of the stopping member and retained within the transverse passageway between the stopping member and the second opening.

To facilitate the correct placement of the orthopedic implant assembly on the bone, the transverse passageway between the collar and the second opening in the stabilizing element may be configured so that the securing element may be angularly displaceable therein and the body of the securing element may be positioned at an angle within the patient's bone.

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In the assembly of the invention, the securing element is prevented from backing out of the bone by the interaction of the securing element head and the stopping member. As a result, a separate anchor means implanted in the bone to receive the screw is not required, and the resulting loss of bone and intraoperative time required to implant the anchor is avoided. Moreover, in a preferred embodiment, the stopping member is within the transverse passageway at the beginning of the procedure, so that the surgeon can attach the implant assembly to the bone with the single motion of advancing the securing element through the stopping member passageway and into the bone. The implant assembly of the invention thus reduces the time required to attach the assembly to the bone and provides improved implant performance.

The orthopedic implant assembly of the invention can be durably attached to bone, and the securing element prevented from significantly backing out of the bone due to the head of the securing element being retained within the stabilizing element. These and other advantages of the invention will become more apparent from the following detailed description of the invention and the accompanying exemplary drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an elevational view of an orthopedic implant assembly which embodies features of the invention.

FIG. 2 is an exploded view, partially in section, of the orthopedic implant assembly shown in FIG. 1.

FIG. 3 is a cross section of the orthopedic implant assembly shown in FIG. 1 taken along lines 3—3.

FIG. 3A is a transverse cross section of the orthopedic implant assembly shown in FIG. 3 taken along lines 3A—3A.

FIG. 4 illustrates the orthopedic implant assembly shown in FIG. 3, as the securing element is being advanced into the patient's bone.

FIG. 4A is a transverse cross section of the assembly shown in FIG. 4, taken along lines 4A—4A.

FIG. 5 illustrates the orthopedic implant assembly shown in FIG. 3, with the securing element advanced into the posterior section of the transverse passageway of the stabilizing element.

FIG. 6 illustrates the orthopedic implant assembly shown in FIG. 3, with the securing element angularly disposed within the patient's bone.

FIG. 7 is an exploded view, partially in section, of an orthopedic implant assembly having a securing element with a compressible head, which embodies features of the invention.

FIG. 8 illustrates the orthopedic implant assembly shown in FIG. 7 as the securing element is being advanced into the patient's bone.

FIGS. 9 is a transverse cross section of the assembly shown in FIG. 8, taken along lines 9—9.

FIG. 10 illustrates the orthopedic implant assembly shown in FIG. 7 with the securing element advanced into the posterior section of the transverse passageway of the stabilizing element.

FIG. 11 is a transverse cross section of the assembly shown in FIG. 10, taken along lines 11—11.

FIG. 12 illustrates the orthopedic implant assembly shown in FIG. 7, with the securing element angularly disposed within the patient's bone.

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FIG. 13 is an exploded view, partially in section, of an orthopedic implant assembly having a deflectable stopping member, which embodies features of the invention.

FIG. 14 illustrates the orthopedic implant assembly shown in FIG. 13 with the securing element advanced into the posterior section of the transverse passageway of the stabilizing element.

FIGS. 15 is a plan view of the assembly shown in FIG. 14, taken along lines 15—15.

DETAILED DESCRIPTION OF THE INVENTION

FIG. 1 illustrates one embodiment of the orthopedic implant assembly 10 of the invention, generally including a stabilizing element 11, with a biased stopping member 12 in a bore 13 therein, and a securing element 14, configured for securing to a patient's bone 15. In the embodiment illustrated in FIG. 1, the biased stopping member comprises an annular collar, although a variety of suitable members may be used, as for example, one or more contractible fingers biased to extend into the transverse passageway (not shown).

As best illustrated in FIG. 2 showing an exploded, partially in section, view of the assembly shown in FIG. 1, the bore 13 of the stabilizing element has a first opening 16 in an anterior surface of the stabilizing element, a second opening 17 in a posterior surface of the stabilizing element, a transverse passageway 18 extending therein, and a groove 21 in an anterior portion of the transverse passageway. Annular collar 12 defines a passageway 22, and is configured to be seated within the groove 21, and has a reversibly expandable inner and outer diameter. As illustrated in FIG. 3, illustrating the assembly shown in FIG. 1 partially in section taken along lines 3—3, and FIG. 3A illustrating a transverse cross sectional view of the assembly shown in FIG. 3 taken along lines 3A—3A, the annular collar 12 is biased to an unexpanded outer diameter which is less than the diameter of the groove and greater than the diameter of the transverse passageway, so that the collar seats within the groove. The expanded outer diameter of the collar is less than the diameter of the groove, and the height of the collar is less than the height of the groove, so that the collar can be expanded therein.

The securing element 14 has an elongated body 23 and an integral head 24 secured to one end of the body 23. In a presently preferred embodiment of the invention illustrated in FIG. 1, the securing element comprises a screw. The head of the securing element is configured to be posteriorly displaceable through the passageway 22 of the collar seated within the groove, from an anterior to a posterior surface of the collar, and retained within a posterior section 25 of the transverse passageway 18 between the posterior surface of the collar 12 and the second, i.e., posterior, opening 17 in the stabilizing element. In the embodiment illustrated in FIG. 1, the head of the securing element has a curved posterior surface 26 with a convex shape and with a smaller diameter than an anterior surface of the head. The curved posterior surface 26 has a minimum outer diameter which is smaller than the unexpanded inner diameter of the collar, and which is positionable within the passageway of the collar, to contact and expand the collar as the head is displaced posteriorly therein.

FIGS. 3—5 illustrate the attachment of the assembly to the patient's bone. As illustrated in FIG. 3, the stabilizing element is positioned against a surface of a bone 15, and the posterior end of the body of the securing element 14 is

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placed within the stabilizing element transverse passageway. The head 24 of the securing element is posteriorly advanced within the passageway 22 of the collar 12, thereby applying a radially expanding force against an inner surface of the collar to expand the inner diameter of the collar, as illustrated in FIG. 4 showing the expanded collar and the head of the securing element partially displaced through the collar passageway. Arrows in FIG. 4 illustrate the expansion of the collar as the head of the securing element is passed there-through. FIG. 4A illustrates a transverse cross section of the assembly shown in FIG. 4, taken along lines 4A—4A. The expanded inner diameter of the collar is therefore larger than the maximum diameter of the head of the securing element, to allow the head of the securing element to pass posteriorly through the collar. The head of the securing element is advanced posteriorly of the collar and into the posterior section 25 of the transverse passageway, so that the collar returns to the unexpanded configuration having an unexpanded inner diameter smaller than the maximum diameter of the head of the securing element, as illustrated in FIG. 5. In the embodiment illustrated in FIG. 5, the flat anterior surface of the head of the securing element has a diameter which is larger than the unexpanded inner diameter of the collar, and the posterior surface of the collar is perpendicular to the longitudinal axis of the transverse passageway. Thus, the anterior surface of the head will butt up against the posterior surface of the collar without expanding the collar, to prevent the securing element from being anteriorly displaced out of the posterior section of the transverse passageway. In the embodiment illustrated in the FIG. 5, a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head, providing maximum contact between the securing element and the stabilizing element. The curved surfaces of the posterior portion of the transverse passageway and the posterior surface of the head have the same radius of curvature, and the diameter of the curved surface of the head is large enough so that the wall defining the transverse passageway contacts the head around the circumference of the curved posterior surface of the head, but is small enough so that the head can be displaced within the transverse passageway. With the head of the securing element positioned within the posterior section 25 of the transverse passageway, the body of the securing element is embedded in, and secured to, the bone of the patient.

In the embodiment illustrated in FIG. 5, the posterior section 25 of the transverse passageway is sufficiently longer than the head 24 of the securing element so that the head can be displaced anteriorly and posteriorly, and is thus longitudinally displaceable within the posterior section of the transverse passageway. Additionally, the body of the securing element 23 has a smaller diameter than the diameter of the second opening 17 in the stabilizing element, and can be displaced from side to side, i.e., medial-lateral displacement, within the second opening 17. As a result, the securing element is angularly displaceable within the transverse passageway posterior section 25 between the collar 12 and the second opening 17 in the stabilizing element, as illustrated in FIG. 6. The securing element can thus be tilted within the transverse passageway at an angle relative to the transverse passageway longitudinal axis, to facilitate positioning the securing element at a desired location in the bone by advancing the body of the securing element within the bone at an angle relative to the surface of the bone. The securing element can be angularly displaced up to an angle of about 45°, preferably up to about 20° relative to the longitudinal axis of the transverse passageway.

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The stopping member 12 is preferably elastically deformable, and formed of titanium, and superelastic or pseudoelastic materials such as NiTi alloys. The unexpanded inner diameter of the stopping member is about 0.1 to about 40 mm, preferably about 0.5 to about 20 mm, and is about 0.05 to about 20 mm, preferably about 0.1 to about 15 mm less than the maximum transverse dimension of the head of the securing element. The unexpanded outer diameter of the stopping member is about 0.2 to about 50 mm, preferably about 1.0 to about 30 mm. The expanded inner diameter of the stopping member is about 0.15 to about 50 mm, preferably about 0.75 to about 30 mm, and the expanded outer diameter of the stopping member is about 0.5 to about 60 mm, preferably about 1.5 to about 40 mm. The height of the stopping member is about 0.01 to about 5 mm, preferably about 0.05 to about 3 mm.

FIGS. 7–12 illustrate another embodiment of the invention, generally comprising a securing element 30, and a stabilizing element 31 similar to the stabilizing element in the embodiment illustrated in FIG. 1, except the stopping member is not seated within a groove in the transverse passageway 18. Instead, a stopping member 32 is provided at an anterior section of the transverse passageway, which may be formed integrally with the stabilizing element or as a separate member secured thereto. In the embodiment illustrated in FIG. 7, the stopping member is a collar at the anterior end of the transverse passageway and defining the first opening 16 in the stabilizing element 31. The securing element 30 has an elongated body 33, and head 34 secured to one end of the body having a compressed configuration and an uncompressed configuration. In the embodiment illustrated in FIG. 7, the head has a plurality of slots 35 defining circumferentially spaced members 36 having posterior ends secured to the body of the securing element. The circumferentially spaced members 36 have anterior ends radially moveable toward a longitudinal axis of the head to form the compressed configuration, having a diameter less than the inner diameter of the collar. FIG. 8 illustrates the head of the securing element in the compressed configuration within the passageway defined by the collar. FIG. 9 illustrates a transverse cross sectional view of the assembly shown in FIG. 8, taken along lines 9—9. FIG. 10 illustrates the head of the securing element advanced posteriorly of the collar and into the posterior section of the transverse passageway, thereby returning the circumferentially spaced members 36 to the uncompressed configuration by release of the radially compressive force of the collar. FIG. 11 illustrates a transverse cross section of the assembly shown in FIG. 10, taken along lines 11—11, with the first opening 16 shown in phantom. The securing element is angularly and longitudinally displaceable within the transverse passageway posterior section 25, as discussed above with regard to the embodiment illustrated in FIG. 1, and as illustrated in FIG. 12.

FIGS. 13–15 illustrate another embodiment of the invention, generally comprising a stabilizing element 41 similar to the stabilizing element in the embodiment illustrated in FIG. 1, except with a deflectable stopping member 42 provided in an anterior section of the transverse passageway, which may be formed integrally with the stabilizing element or as a separate member secured thereto. In the embodiment illustrated in FIG. 13, the stopping member comprises a collar 42 having a plurality of slots 43 defining circumferentially spaced members 44 and a tapered or sloping anterior surface providing axial flexibility in a posterior direction, so that the collar deflects posteriorly when the head of the securing element is posteriorly dis-

placed through the collar. As a result, the circumferentially spaced members 44 have a wedge shape and a height which tapers towards the central passageway 45 defined by the collar, which facilitates displacing the head of the securing element therethrough and reversibly enlarging the passageway 45. In the embodiment illustrated in FIG. 13, the collar is integrally formed with the stabilizing element 41 at the anterior end of the transverse passageway, and defines the first opening 16 in the stabilizing element 41. The securing element may be the same as, or similar to, the securing element 14 discussed above in connection with the embodiment illustrated in FIG. 1, and as illustrated in FIG. 13. However, securing element 30 having head 34 with a compressed configuration and an uncompressed configuration, as discussed above in connection with the embodiment illustrated in FIG. 7, may also be used. FIG. 15 illustrates a plan view of the assembly shown in FIG. 14, taken along lines 15—15, with the head of the securing element 14 partially in phantom. The angular and longitudinal displacement of the securing member in the posterior section 25 of the transverse passageway is as discussed above.

The stabilizing element is preferably formed of a metal such as titanium or stainless steel. The length of the stabilizing element is typically about 7 to about 300 mm, preferably about 13 to about 200 mm, and the width of the stabilizing element is typically about 5 to about 50 mm, preferably about 10 to about 30 mm. The height of the stabilizing element is typically about 0.5 to about 10 mm, preferably about 1.0 to about 6.0 mm although the dimensions of the stabilizing element will vary depending on the application for which the assembly is to be used.

The securing element is preferably formed of a metal, such as titanium or stainless steel. The head of the securing element is configured, as for example with a hexagonal opening, for releasable connection to a tool for advancing the securing element into the bone. The body of the securing element has a length of about 2 to about 50 mm, preferably about 5 to about 20 mm, and the head of the securing element has a length of about 0.05 to about 1.5 mm, preferably about 0.5 to about 1.0 mm. One skilled in the art will recognize that a variety of suitable securing elements may be used, which may be optimized for use in a particular orthopedic environment, as is well known in the art. For example, a high thread pitch may be used to limit screw back out from bone.

The assembly of the invention is suitable for use in a variety of medical procedures, including securing fractured bone segments or vertebrae following disk removal. In the illustrated embodiments, the stabilizing element comprises a plate, although other suitable elements such as rods may be used. Additionally, the stabilizing element may be shaped to conform to the surface of the bone or bones to which it will be attached. For example, a presently preferred embodiment of the stabilizing element comprises a plate with a concave posterior surface, and is configured for attaching to vertebrae.

While the present invention has been described herein in terms of certain preferred embodiments, those skilled in the art will recognize that modifications and improvements may be made without departing from the scope of the invention. For example, while the stopping member is discussed primarily in terms of a collar, other configurations may also be used. Additionally, while a particular feature may be discussed in connection with one embodiment, it should be understood that features of one embodiment may be used with the other embodiments herein.

What is claimed is:

1. An orthopedic implant assembly, comprising
 - a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening;
 - b) a biased stopping member defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration; and
 - c) a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element.
2. The assembly of claim 1 wherein the biased stopping member comprises a collar defining a passageway, enlargable from an unexpanded inner diameter to an expanded inner diameter, wherein the head of the securing element has a maximum diameter greater than the unexpanded inner diameter of the collar and less than the expanded inner diameter of the collar.
3. The assembly of claim 2 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, configured to be displaceable posteriorly of the collar through the passageway of the collar from an anterior to a posterior surface thereof.
4. The assembly of claim 2 wherein the bore has a groove in an anterior portion of the transverse passageway having a diameter and a height, and wherein the collar is a reversibly expandable annular collar seated in the groove, the collar having an expanded outer diameter, and an unexpanded outer diameter which is less than the diameter of the groove and greater than a diameter of the transverse passageway.
5. The assembly of claim 4 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.
6. The assembly of claim 2 wherein the collar is secured to an anterior section of the transverse passageway, and has a plurality of slots and circumferentially spaced members, the circumferentially spaced members having a deflected configuration defining the expanded inner diameter of the collar.
7. The assembly of claim 6 wherein the head of the securing element has a curved posterior surface which has a minimum outer diameter smaller than the unexpanded inner diameter of the collar, and which is configured to contact the collar anterior surface and deflect the circumferentially spaced members away from a longitudinal axis of the transverse passageway as the head is displaced posteriorly through the collar passageway.
8. The assembly of claim 6 wherein the collar has an anterior surface which tapers toward a center of the transverse passageway.
9. The assembly of claim 3 wherein a posterior portion of the transverse passageway is curved to conform to the curved posterior surface of the head.

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10. The assembly of claim 1 wherein the head of the securing element is longitudinally displaceable within the transverse passageway between a posterior surface of the biased stopping member and the second opening in the posterior surface of the stabilizing element.

11. The assembly of claim 10 wherein the body of the securing element has a diameter smaller than the second opening in the stabilizing element, and the securing element may be angularly displaced within the transverse passageway and the second opening in the stabilizing element.

12. The assembly of claim 1 wherein the stabilizing element includes at least two bores.

13. The assembly of claim 1 wherein the stabilizing element is configured to conform to and extend between at least two bone segments.

14. The assembly of claim 13 wherein the stabilizing element has a curved surface.

15. The assembly of claim 1 wherein the stabilizing element is selected from the group consisting of rods and plates.

16. The assembly of claim 1 wherein the securing element is selected from the group consisting of screws and nails.

17. The assembly of claim 2 wherein the collar is formed of an elastically deformable material.

18. The assembly of claim 2 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

19. The assembly of claim 2 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

20. The assembly of claim 4 wherein the collar has a height less than the height of the groove.

21. A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a biased stopping member within the bore and defining at least in part a reversibly expandable passageway having a smaller diameter configuration and a larger diameter configuration;
- b) providing a securing element having an elongated body, and a head at one end of the body and integral therewith, the head having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the biased stopping member and greater than the second opening in the stabilizing element, so that the head is retained within the transverse passageway between the biased stopping member and the second opening in the stabilizing element;
- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within the passageway defined by the biased stopping member and thereby displacing the biased stopping member to form the larger diameter configuration passageway defined thereby; and
- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the biased stopping member so that the passageway defined thereby returns to the smaller diameter configuration, to position the head within a posterior section of the transverse passageway between the biased stopping

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member and the second opening in the stabilizing element, and to position the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

22. The method of claim 21 including, after the head of the securing element is positioned between the biased stopping member and the second opening in the stabilizing element, the step of longitudinally and angularly displacing the head of the securing element within the transverse passageway, so that the body of the securing element is positioned at an angle within the patient's bone relative to the surface of the bone.

23. An orthopedic implant assembly, comprising

- a) a stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway; and
- b) a securing element having an elongated body and a head secured to one end of the body, the head having a reversibly compressed configuration with a compressed diameter less than the diameter of the first opening and an uncompressed configuration with a diameter greater than a diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the stopping member and the second opening in the stabilizing element.

24. The assembly of claim 23 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping member from an anterior to a posterior surface thereof.

25. The assembly of claim 23 wherein the head of the securing element has a plurality of slots and circumferentially disposed members, the circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

26. The assembly of claim 23 wherein the stopping member is at the anterior end of the transverse passageway and defines the first opening in the stabilizing element.

27. The assembly of claim 23 wherein the stopping member has a posterior surface perpendicular to a longitudinal axis of the transverse passageway.

28. A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) positioning a stabilizing element against a surface of the patient's bone, the stabilizing element having an anterior surface, a posterior surface, and at least one bore, the bore having a first opening in the anterior surface, a second opening in the posterior surface smaller than the first opening, and a transverse passageway extending from the first opening to the second opening, and a stopping member at an anterior section of the transverse passageway;
- b) providing a securing element having an elongated body and a head secured to one end of the body, the head

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having a reversibly compressed configuration with a compressed diameter less than a diameter of the first opening and an uncompressed configuration with a diameter greater than the diameter of the stopping member and the second opening, so that the head of the securing element is retained within the transverse passageway between the stopping member and the second opening in the stabilizing element;

- c) positioning the body of the securing element in the transverse passageway and posteriorly advancing the head of the securing element within a passageway defined by the stopping member and thereby compressing the diameter of the head of the securing element; and

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- d) attaching the stabilizing element to the bone by advancing the head of the securing element posteriorly of the stopping member so that the diameter of the head of the securing element returns to the uncompressed configuration, to position the head within a posterior section of the transverse passageway between the stopping member and the second opening in the stabilizing element and the body of the securing element within the patient's bone, so that the securing element is attached to the bone and is retained within the posterior section of the transverse passageway of the stabilizing element.

* * * * *



US006261291B1

(12) **United States Patent**
Talaber et al.

(10) **Patent No.:** **US 6,261,291 B1**
(45) **Date of Patent:** ***Jul. 17, 2001**

(54) **ORTHOPEDIC IMPLANT ASSEMBLY**

(76) **Inventors:** **David J. Talaber**, 5185 Charlotte Way,
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James R. Lloyd, 1080 Circle Dr., Elm
Grove, WI (US) 53122

(*) **Notice:** This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** **09/349,519**

(22) **Filed:** **Jul. 8, 1999**

(51) **Int. Cl.⁷** **A61B 17/70**

(52) **U.S. Cl.** **606/69; 606/71; 606/73**

(58) **Field of Search** **606/60, 63, 66, 606/68, 70, 71, 72, 73, 86**

(56) **References Cited**

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Primary Examiner—Michael Buiz

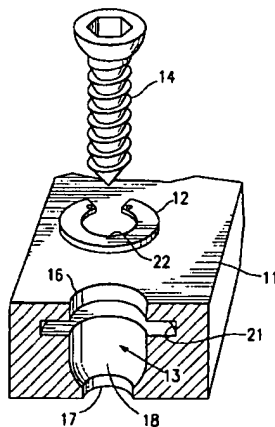
Assistant Examiner—William Lewis

(74) *Attorney, Agent, or Firm*—Heller Ehrman White & McAuliffe LLP

(57) **ABSTRACT**

An orthopedic implant assembly comprising a stabilizing element, a securing element which attaches the stabilizing element to the bone, and a stopping member in the stabilizing element which inhibits the securing element from loosening or backing out of the bone. The stabilizing element has at least one bore with the stopping member therein. In one embodiment, the stopping member has a reversibly expandable inner and outer diameter to allow the securing element to pass posteriorly through the stopping member, but thereafter prevent or inhibit the securing element from anteriorly backing out of the posterior section of the transverse passageway. In another embodiment, the stopping member is secured to an anterior section of the transverse passageway, and the head of the securing element generally has a compressed configuration with a diameter less than the diameter of the stopping member, in which configuration the head can pass through the stopping member, and an uncompressed configuration with a diameter larger than the diameter of the stopping member.

28 Claims, 7 Drawing Sheets



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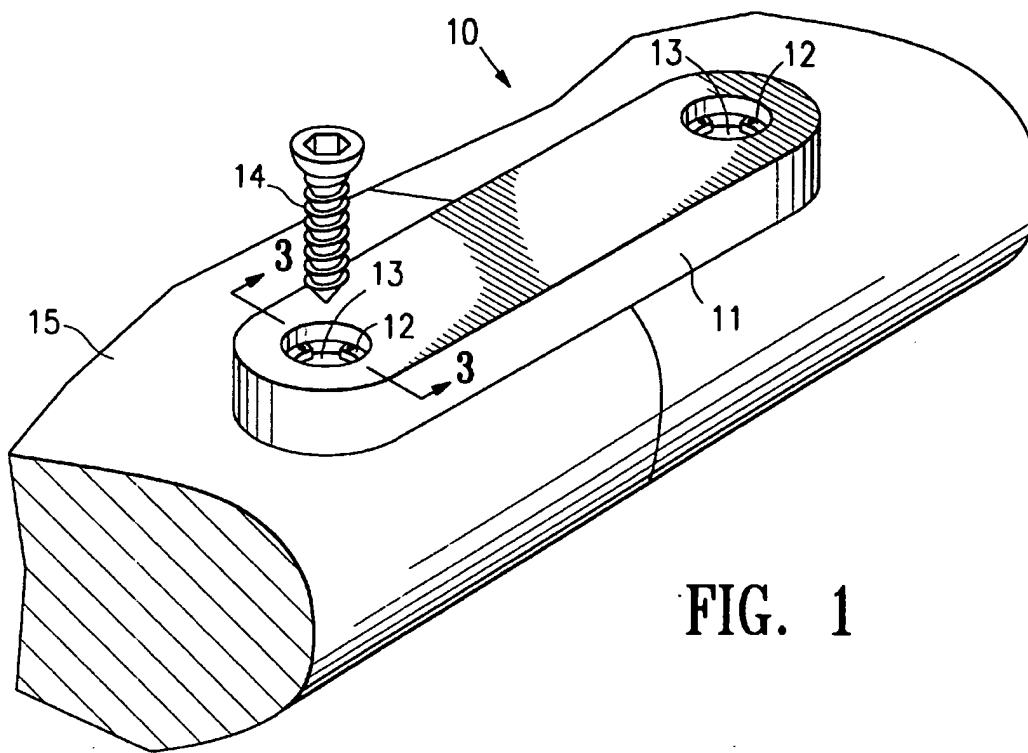
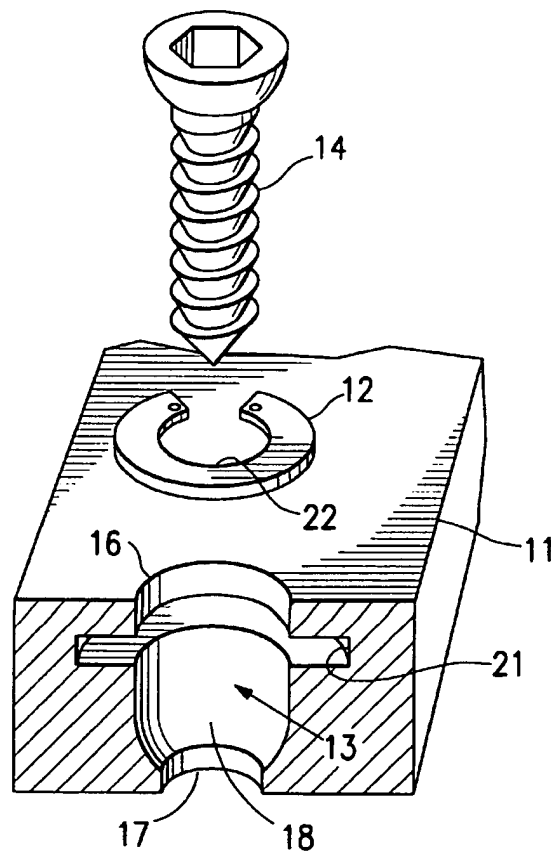


FIG. 1

FIG. 2



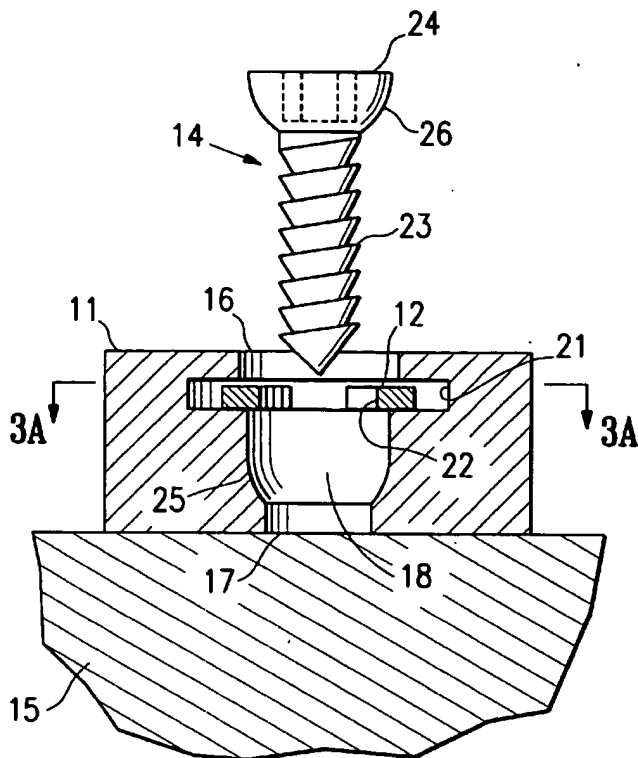


FIG. 3

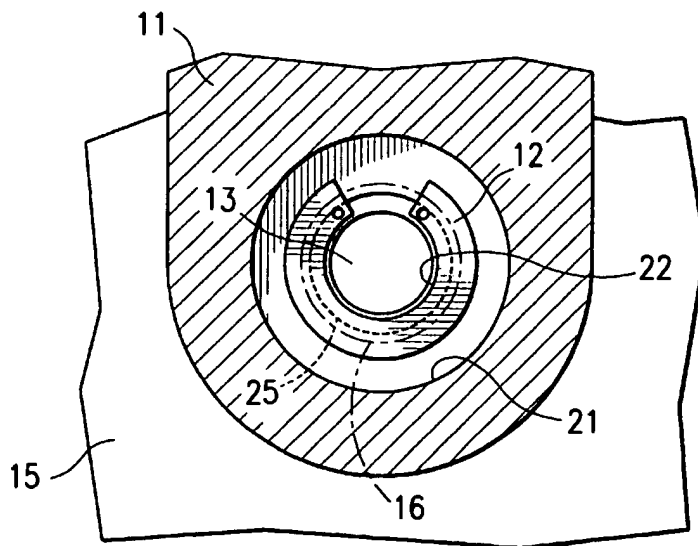


FIG. 3A

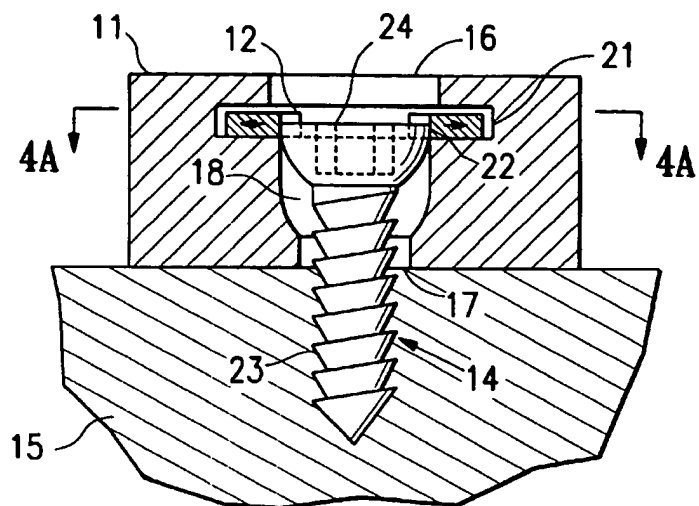


FIG. 4

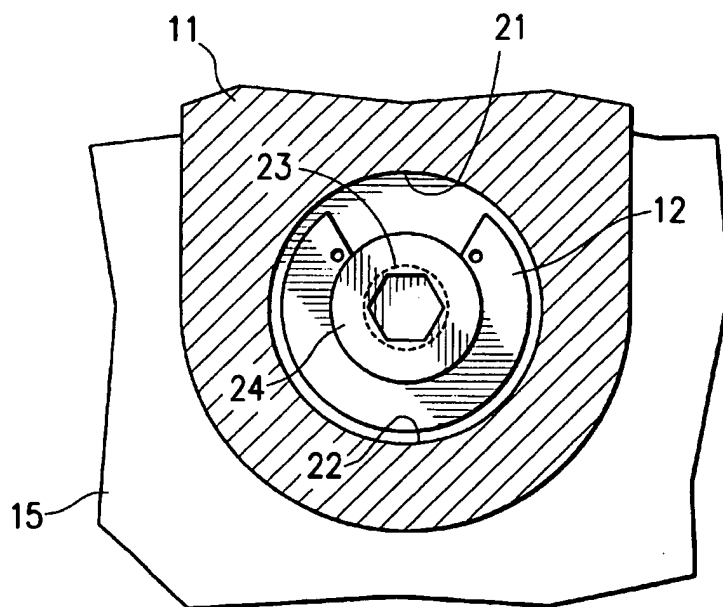


FIG. 4A

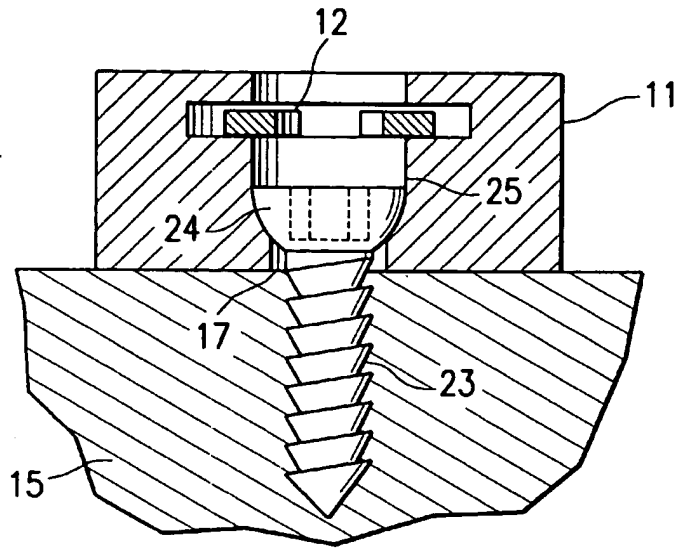


FIG. 5

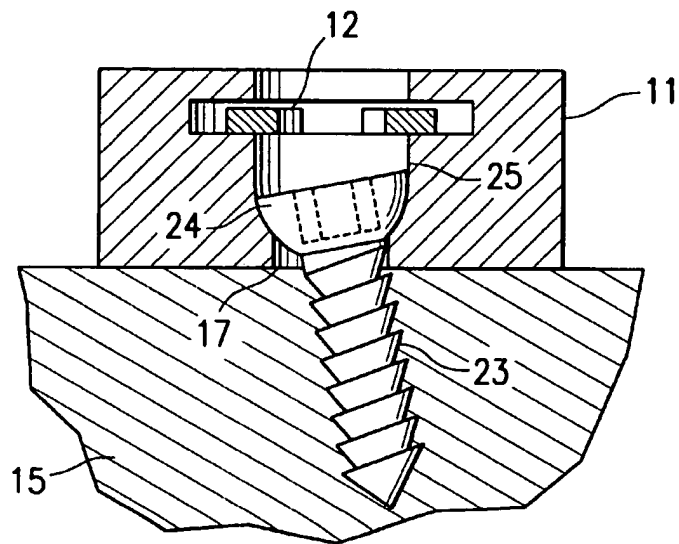


FIG. 6

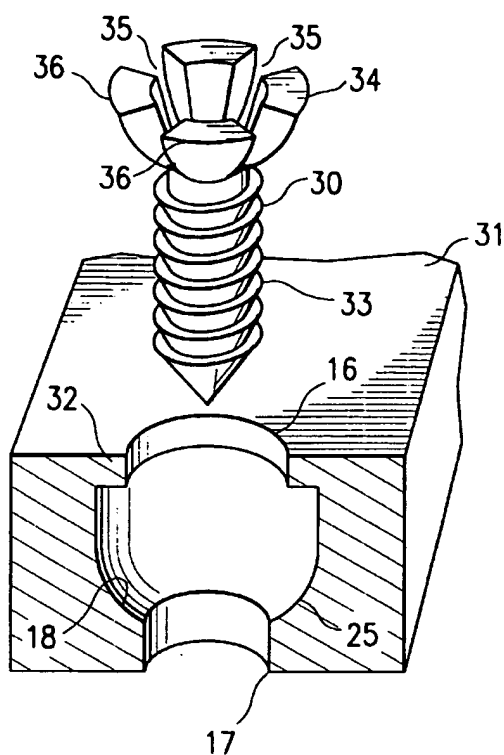


FIG. 7

FIG. 9

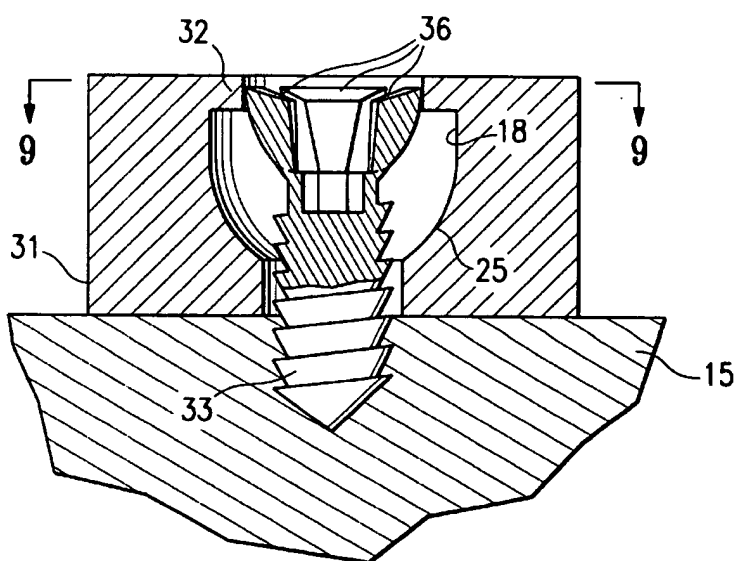
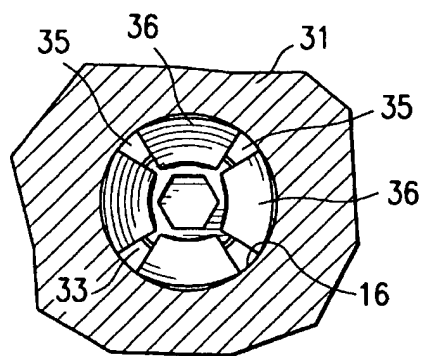


FIG. 8

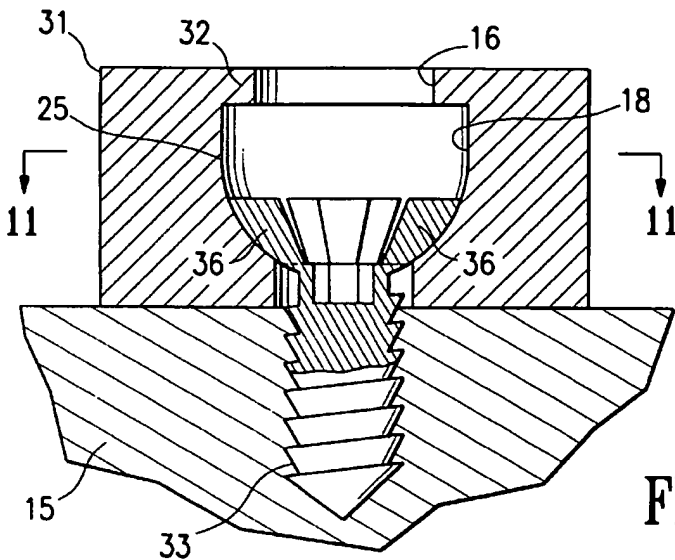


FIG. 10

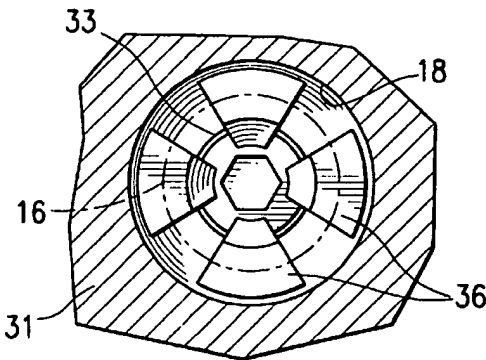


FIG. 11

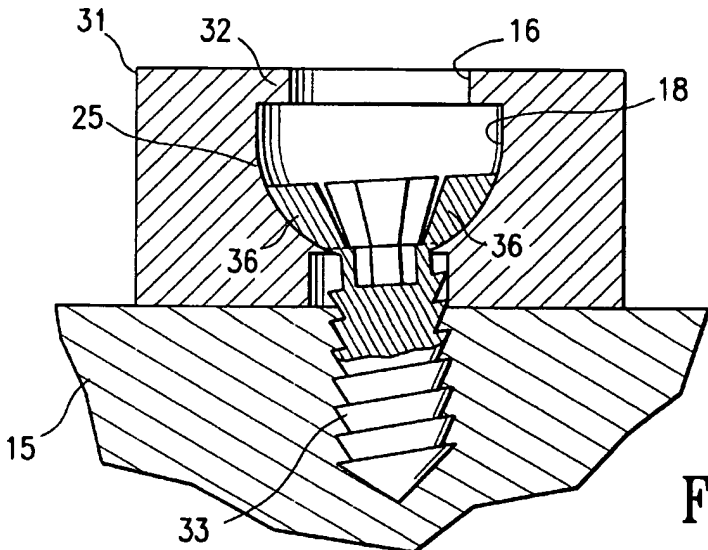


FIG. 12

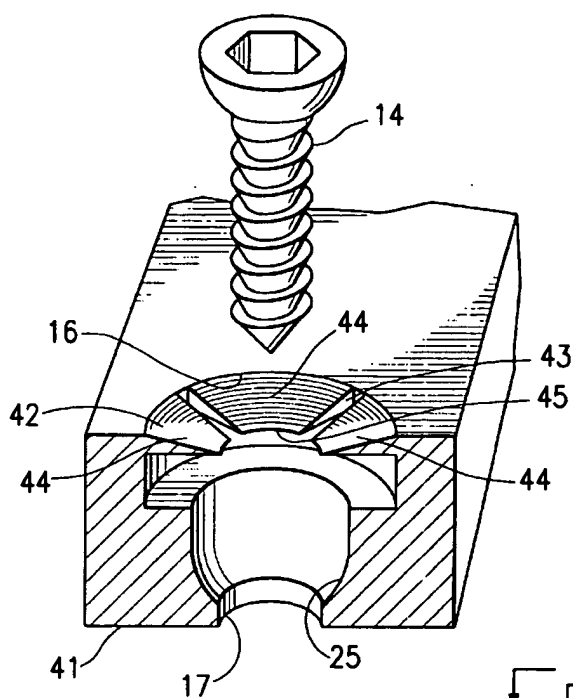


FIG. 13

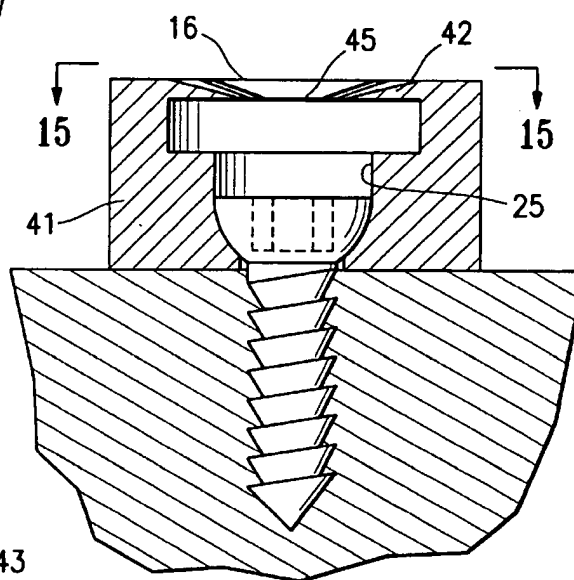


FIG. 14

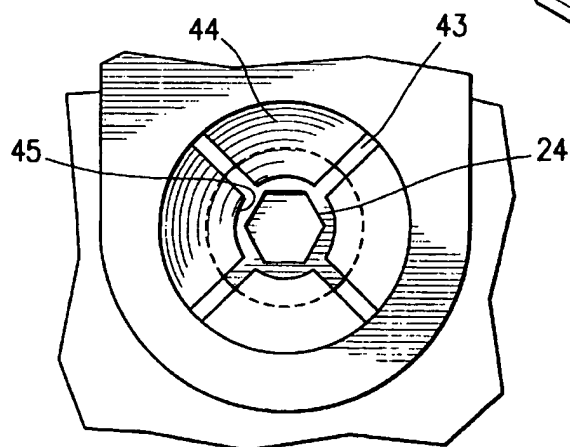


FIG. 15

REISSUE APPLICATION DECLARATION BY THE INVENTOR	Docket Number (Optional) 09617.1001
I hereby declare that: Each inventor's residence, mailing address and citizenship are stated below next to their name. I believe the inventors named below to be the original and first inventor(s) of the subject matter which is described and claimed in patent number <u>6,261,291</u>, granted <u>July 17, 2001</u> and for which a reissue patent is sought on the invention entitled <u>ORTHOPEDIC IMPLANT ASSEMBLY</u>, the specification of which ☒ is attached hereto. ☐ was filed on _____ as reissue application number _____ and was amended on _____ (If applicable) I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56. ☐ I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b). Attached is form PTO/SB/2B (or equivalent) listing the foreign applications. I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.) ☐ by reason of a defective specification or drawing. ☐ by reason of the patentee claiming more or less than he had the right to claim in the patent. ☐ by reason of other errors. At least one error upon which reissue is based is described below. If the reissue is a broadening reissue, such must be stated with an explanation as to the nature of the broadening: The new claim 29 is broader than issued claims 1 and 23 of the U.S. Patent No. 6,261,291 in several aspects. New claim 29 is directed to an attachment member that has an "attachment component" which does not require "an anterior surface" and "a posterior surface" as required by the issued claims. Moreover, the new claim 29 includes a "stopping surface" which does not require "a biased stopping member" as set forth in the issued claims. Additionally, new claim 29 does not positively include a securing member.	

[Page 1 of 2]

This collection of information is required by 37 CFR 1.175. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Docket Number (Optional)

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith.

Name(s) Edward J. Lynch Registration Number 24,422

Correspondence Address: Direct all communications about the application to:

☐ Customer Number:

OR

☒ Firm or Individual Name	Edward J. Lynch				
Address	One Market				
Address	Spear Tower, Suite 2000				
City	San Francisco	State	CA	Zip	94101
Country	U.S.				
Telephone	(415) 371-2267	Fax	(415) 371-2201		

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of sole or first inventor (given name, family name)

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Residence 1080 Circle Dr., Elm Grove, WI 53122	Citizenship U.S.

Mailing Address
Same

Full name of third joint inventor (given name, family name)

Inventor's signature	Date
Residence	Citizenship
Mailing Address	

☐ Additional joint inventors or legal representative(s) are named on separately numbered sheets forms PTO/SB/02A or 02LR attached hereto.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

CONSENT OF ASSIGNEE TO REISSUE, POWER OF ATTORNEY AND STATEMENT UNDER 37 C.F.R. 1.373(b)		Docket Number (Optional) 09617.1001
This is part of the application for a reissue patent based on the original patent identified below.		
Name of Patentee(s) TALABER ET AL.		
Patent Number 6,261,291	Date Patent Issued 09617.1001	
Title of Invention ORTHODPEDIC IMPLANT ASSEMBLY		
1. ☒ Filed herein is a statement under 37 CFR 3.73(b). (Form PTO/SB/96) Statement of Ownership: Assignee Acantha LLC is the holder of all right, title and interest in the U.S. Pat. No. 6,261,291 by virtue of assignment recorded on June 4, 2002 at reel/frame 012967/0893. 2. ☐ Ownership of the patent is in the inventor(s), and no assignment of the patent is in effect.		
One of boxes 1 or 2 above must be checked. If multiple assignees, complete this form for each assignee. If box 2 is checked, skip the next entry and go directly to "Name of Assignee". The written consent of all assignees and inventors owning an undivided interest in the original patent is included in this application for reissue.		
The assignee(s) owning an undivided interest in said original patent is/are _____, and the assignee(s) consents to the accompanying application for reissue.		
Name of assignee/inventor (if not assigned) ACANTHA LLC		
Signature	Date	
Typed or printed name and title of person signing for assignee (if assigned) David J. Talaber, President		

This collection of information is required by 37 CFR 1.172. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application for	)	Examiner: Not yet assigned
	)	
Patent No.: 6,261,291	)	Group Art Unit: Not yet assigned
	)	
Issued: July 17, 2001	)	Attorney Docket No.: 09617.1001
	)	
Inventors: Talaber et al.	)	
	)	
Reissue Serial No.: Not yet assigned	)	<u>PRELIMINARY AMENDMENT</u>
	)	
For: ORTHOPEDIC IMPLANT	)	
ASSEMBLY	)	
	)	
Filed: Concurrently	)	

Express Mail Label No.: ER 203737890 US
Date Mailed: July 15, 2003

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Dear Sirs:

Please preliminarily amend the above identified reissue application as follows.

IN THE CLAIMS

Please add new claims 29-62 as indicated below:

29. (New) An orthopedic attachment member, comprising:
- a. an attachment component which has at least one bore configured to receive a securing member with an enlarged portion, the bore having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion;
 - b. a stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway portion; and
 - c. a third bore passageway portion between the stopping surface and the second bore passageway portion having a surface configured to conform at least in part to part of the enlarged portion of a securing member received by the bore.
30. (New) The attachment member of claim 29 wherein the stopping surface
has
a first configuration with inner transverse dimensions that are smaller than the
enlarged portion of a securing member received by the bore and

a second configuration with inner transverse dimensions that are at least equal to the enlarged portion of the securing member received by the bore.

31. (New) The attachment member of claim 29 including a securing member having an enlarged head portion disposed within the bore.

32. (New) The attachment member of claim 31 wherein the enlarged head portion of the securing member has at least one transverse dimension greater than the reduced transverse configuration of the first bore passageway portion.

33. (New) The attachment member of claim 32 wherein the enlarged head portion of the securing member has a posterior surface configured to engage the first bore passageway to facilitate the angulation of the securing element within the bore.

34. (New) The attachment member of claim 33 wherein the first bore passageway has a bowl-shaped surface.

35. (New) The attachment member of claim 34 wherein the bowl-shaped surface of the first bore passageway at least in part is a hemispherical zone.

36. (New) The attachment member of claim 29 wherein the stopping surface is part of a biased stopping member.

37. (New) The attachment member of claim 36 wherein the biased stopping member is a collar defining at least in part a passageway enlargeable from an unexpanded first inner diameter to an expanded second inner diameter larger than the first inner diameter, wherein an enlarged head of a securing element has a maximum diameter greater than the unexpanded first inner diameter of the collar and less than the expanded inner diameter of the collar.

38. (New) The attachment member of claim 37 wherein the bore has a groove in the first bore passageway which receives the collar.

39. (New) The attachment member of claim wherein the enlarged portion of the securing element has a curved posterior surface which is configured to contact the collar anterior surface and expand the collar as the head is displaced posteriorly through the collar passageway.

40. (New) The assembly of claim 36 wherein the collar has an anterior surface which tapers inwardly toward the transverse passageway passing therethrough.

41. (New) The attachment member of claim 29 wherein a part of the third bore passageway portion is configured to conform to a posterior surface of an enlarged portion of a securing element received within the bore passageway.

42. (New) The attachment member of claim 31 wherein a portion of the securing element posterior to the enlarged head has smaller transverse dimensions than the second bore passageway in the attachment component so the securing element may be angularly displaced within the bore.

43. (New) The attachment member of claim 29 wherein the attachment component includes at least two bores.

44. (New) The attachment member of claim 29 wherein the attachment component is configured to conform to and extend between at least two bone segments.

45. (New) The attachment member of claim 29 wherein the attachment component has a curved surface.

46. (New) The attachment member of claim 29 wherein the attachment component is selected from the group consisting of rods and plates.

47. (New) The attachment member of claim 31 wherein the securing element disposed within the bore is selected from the group consisting of screws and nails.

48. (New) The attachment member of claim 37 wherein the collar is formed of an elastically deformable material.

49. (New) The attachment member of claim 37 wherein the collar is formed of a material selected from the group consisting of titanium and superelastic material.

50. (New) The attachment member of claim 37 wherein the collar has a posterior surface perpendicular to a longitudinal axis of the bore extending through the attachment component.

51. (New) The attachment member of claim 4 wherein the collar has a height less than the height of the groove.

52. (New) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
 - an attachment component which has at least one bore configured to
 - receive a securing member with an enlarged portion, the bore
 - having a first bore passageway portion, and a second bore
 - passageway portion having at least one smaller transverse
 - dimension than transverse dimensions of the first bore passageway
 - portion,

a stopping surface which reduces a transverse configuration of the first bore passageway to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body, and an enlarged portion at or near one end of the body having a maximum diameter greater than the smaller diameter configuration of the passageway defined by the stopping member and greater than the second bore passageway portion in the attachment component to retain the enlarged portion of the securing element within the third bore passageway portion between the stopping surface and the second bore passageway portion in the attachment component;
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the enlarged portion of the securing element is in the third bore passageway portion.

53. (New) The method of claim 52 wherein after the enlarged portion of the securing element is positioned in the third bore passageway portion between the stopping surface and the second bore passageway portion and the securing element is angularly displaceable within the bore so that the securing element may be secured within the patient's bone at an angle relative to a longitudinal axis of the bore.

54. (New) An orthopedic implant assembly, comprising
- a) an attachment member comprising
an attachment component which has at least one bore configured
to receive a securing member with an enlarged portion, the
bore having a first bore passageway portion, and a second
bore passageway portion having at least one smaller
transverse dimension than transverse dimensions of the first
bore passageway portion;
a stopping surface which reduces a transverse configuration of the
first bore passageway portion to retain the enlarged portion
of a securing element within the bore of the attachment
member between the stopping surface and the second bore
passageway portion, and
a third bore portion between the stopping surface and the second
bore passageway portion having a surface configured to
conform at least in part to part of the enlarged portion of a
securing member received by the bore
- b) a securing element having an elongated body and an enlarged
head at one end of the elongated body which has a reversibly
compressed configuration with transverse dimensions less than the
reduced transverse configuration of the first bore passageway
portion formed by the stopping surface and which has an
uncompressed configuration with a diameter greater than the

reduced transverse configuration of the first bore passageway portion and the second opening, so that the head of the securing element is retained within the bore between the stopping member and the second bore passageway portion in the attachment component.

55. (New) The implant assembly of claim 54 wherein the head of the securing element is configured to be displaceable posteriorly through the stopping surface from an anterior to a posterior portion thereof.

56. (New) The implant assembly of claim 54 wherein the head of the securing element has a plurality of slots and circumferentially disposed members having posterior ends secured to the body of the securing element, and anterior ends radially moveable toward a longitudinal axis of the head of the securing element to form the compressed configuration and away from the longitudinal axis to form the uncompressed configuration.

57. (New) The implant assembly of claim 54 wherein the stopping surface is at the anterior end of the bore and defines a first opening in the attachment component.

58. (New) The implant assembly of claim 54 wherein the stopping surface is perpendicular to a longitudinal axis of the bore.

59. (New) A method of attaching an orthopedic implant assembly to a bone of a patient, comprising

- a) providing an attachment member comprising
an attachment component which has at least one bore configured to
receive a securing member with an enlarged portion, the bore

having a first bore passageway portion, and a second bore passageway portion having at least one smaller transverse dimension than transverse dimensions of the first bore passageway portion,

a stopping surface which reduces a transverse configuration of the first bore passageway to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway;

- b) positioning the attachment member against a surface of the patient's bone;
- c) providing a securing element having an elongated body and an enlarged head secured to one end of the body which has a reversibly compressed configuration with transverse dimensions less than the reduced transverse configuration of the first bore passageway portion formed by the stopping surface and which has an uncompressed configuration with a diameter greater than the reduced transverse configuration of the first bore passageway portion and the second opening, so that the head of the securing element is retained within the bore between the stopping member and the second bore passageway portion in the attachment component; and
- d) attaching the securing element to the patient's bone by advancing the securing element within the bore of the attachment component until the

enlarged portion of the securing element is in the passageway defined by the stopping surface.

60. (New) An intracorporeal attachment member, comprising:

- a. an attachment component which has at least one bore configured to receive a securing member with an enlarged portion, the bore having a first bore passageway portion, and a second bore passageway portion with smaller transverse dimensions than transverse dimensions of the first bore passageway portion;
- b. a stopping surface which reduces a transverse configuration of the first bore passageway portion to retain the enlarged portion of a securing element within the bore of the attachment member between the stopping surface and the second bore passageway portion; and
- c. a third bore passageway portion between the stopping surface and the second bore passageway portion having a surface configured to conform at least in part to part of an enlarged portion of a securing member received by the bore.

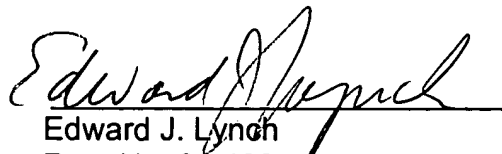
61. (New) The intracorporeal attachment member of claim 60 including a securing member having an enlarged head portion disposed within the bore.

62. (New) The attachment member of claim 61 wherein the enlarged head portion of the securing member has at least one transverse dimension greater than the reduced transverse configuration.

REMARKS

Applicants believe that the pending claims of this reissue application are directed to patentable subject matter and respectfully request examination and allowance of these claims.

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