

Exhibit 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ORTHOCISION, INC.,
Petitioner,

v.

PAIN TEQ, LLC,
Patent Owner.

Patent No. 11,020,129
Issue Date: June 1, 2021

Title: DRILL-LESS METHOD OF FUSING A SACROILIAC JOINT

Inter Partes Review No. IPR2023-00625

SECOND DECLARATION OF DR. CHRISTOPHER J. BOVINET

TABLE OF CONTENTS

I. Introduction	3
II. Qualifications	4
III. Level of Ordinary Skill in the Art	5
IV. Relevant Legal Standards.....	6
A. Person of Ordinary Skill In the Art.....	6
B. Obviousness	7
V. Claim Construction	7
1. “Open tip”	8
2. “Releasing means”	11
VI. The prior art cited in the IPR Petition does not teach or suggest all elements of claim 1	13
A. Under the correct claim construction, Sharma does not teach or suggest the “releasing means” element of claim 1	13
B. Donner’s dual-keel abrading head does not have an “open tip”	17
C. Martz does not teach the limitation “a cutting edge disposed at a leading edge of the open tip, the cutting edge configured to cut bone tissue in the sacroiliac joint”.....	19
VII. No MOTIVATION for the Compton-Donner-otte-sharma combination	20
VIII. Right to Supplement	22
IX. Conclusion.....	22

I, Christopher J. Bovinet, hereby declare and state as follows:

I. INTRODUCTION

1. I have been engaged by Hill Ward Henderson, P.A. on behalf of Pain TEQ, LLC (“Patent Owner”) for the above captioned *inter partes* review (“IPR”) by the U.S. Patent & Trademark Office Patent Trial and Appeal Board.

2. I have been asked to provide my analysis and expert opinions with respect to the validity of claims 1, 2, 9, and 10 (“the Challenged Claims”) of U.S. Patent No. 11,020,129 (“the ‘129 Patent”).

3. It is my opinion that the Challenged Claims are patentable over the prior art cited in Petition at least for the reasons set forth in this declaration. The explanation of the deficiencies of the invalidity grounds asserted in the Petition, as well as the rationale for my opinions, are set forth below.

4. I am being compensated for my time at a rate of \$500 per hour, plus reimbursement for my expenses. My compensation in this matter is not dependent on or related to the outcome of this matter.

5. I understand that the ‘129 Patent was filed on October 5, 2020 and issued on June 1, 2021. I understand that the ‘129 Patent is currently assigned to Patent Owner.

6. I have reviewed and am familiar with the specification of the ‘129 Patent and understand that it has been provided as Exhibit 1001. I have also reviewed and am familiar with the prior art references identified in the Petition (Paper 1).

7. The ‘129 Patent is for a “drill-less method of fusing a sacroiliac joint.” (Ex. 1001, at 1:1-2). I am familiar with the methods and associated medical tools described in the ‘129 Patent as of its filing date (October 5, 2020), as well as the filing dates of its Parent (April 17, 2020) and Provisional (October 4, 2019).

II. QUALIFICATIONS

8. My *curriculum vitae* is attached to this Declaration as Exhibit 2002 and describes my qualifications in detail.

9. I am a Board Certified physician in Physical Medicine & Rehabilitation by American Board of Physical Medicine and Rehabilitation, with a sub-specialty in Pain Medicine.

10. I am an interventional pain management physician and the medical director at The Spine Center of Southeast Georgia and The Brunswick Pain Treatment Center, both located in Brunswick, Georgia. I have held these positions since 2014. In my medical practice, I specialize in spinal injections and minimally-invasive spinal and sacroiliac joint surgery techniques. I have performed over three hundred minimally-invasive posterior sacroiliac joint (SI joint) fusion procedures.

11. I am the director-at-large of the Georgia Society of Interventional Pain Physicians. In addition, I serve as a consultant for several spine and neuromodulation medical advisory boards. In the past, I have served on the medical advisory board for St. Jude's Medical.

12. I graduated *cum laude* with a Bachelor of Science degree in Biochemistry from Lee University in Cleveland, Tennessee in 2001. I graduated with a Doctor of Osteopathy degree from Michigan State University College of Osteopathic Medicine in East Lansing, Michigan in 2008. I have completed my residency in 2013 and fellowship at Virginia Commonwealth University Physical Medicine & Rehabilitation in Richmond, Virginia in 2014.

III. LEVEL OF ORDINARY SKILL IN THE ART

13. I believe that a person of ordinary skill in the art ("POSA") with respect to the subject matter claimed in the '129 Patent would have had an engineering or a medical degree and would have at least three years of experience with the sacroiliac joint fusion procedures and the surgical tools required to perform them.

14. I am a person of ordinary skill in the art and was such as of the earliest effective filing date of the '129 Patent, which is October 4, 2019.

15. In forming my opinions, in addition to my own knowledge and experience, I have considered the '129 Patent, the cited prior art references, and any other references referred to or cited in this declaration.

IV. RELEVANT LEGAL STANDARDS

16. In developing my opinions, I have discussed with Patent Owner's attorneys various legal principles. I understood those legal principles and have relied upon them in forming my opinions set forth in this declaration. I am not an attorney and have not researched legal issues of patent validity. I am relying solely on explanations from Patent Owner's attorneys for these legal standards.

17. I understand that an *inter partes* review (IPR) is a proceeding before the Patent Trial and Appeal Board (PTAB) for evaluating patentability of a challenged patent claim based on prior art patents and publications.

18. I understand that Petitioner is challenging the validity of claims 1, 2, 9 and 10 of the '129 Patent and that Petitioner has the burden of establishing that these claims are unpatentable.

A. Person of Ordinary Skill In the Art

19. I understand that a person of ordinary skill in the art is a hypothetical person who is presumed to have average knowledge and skill in the technical field of the invention at the time it was invented. I understand that a person of ordinary skill in the art understands related references in the technical field and reasonably understands the problem the claimed invention attempts to address.

B. Obviousness

20. I understand that a patent claim is unpatentable for being obvious if the difference between the claimed subject matter and the prior art as a whole, would have been obvious to a person of ordinary skill in the art at the time of invention.

21. I understand that an obviousness analysis is based on the understanding of a person of ordinary skill in the art at the time of the claimed invention and involves a consideration of the scope and content of the prior art, the differences between the prior art and the challenged claims, the knowledge of a person of ordinary skill in the art in the pertinent art, and objective factors indicative of non-obviousness, when such are present.

22. I understand that in determining whether a patent claim would have been obvious over a combination of prior art references, a person of ordinary skill in the art must have had a reason for combining teachings from these references in the fashion proposed and would have reasonably expected success in such combination.

23. I understand that an obviousness analysis requires comparing the properly construed claim language to the prior art on a limitation-by-limitation basis.

V. CLAIM CONSTRUCTION

24. I understand that claim construction is a matter of law. Further, I understand that during an IPR, claim terms are generally given their plain and

ordinary meaning as understood by a person of ordinary skill in the art at the time of the invention of the patent at issue, in light of the specification and the prosecution history.

25. I have understood all terms of the claims and interpreted them in accordance with their plain and ordinary meaning, as would be understood by a person of ordinary skill in the art.

26. I have read Petitioner's proposed claim constructions and I believe that the prior art combinations analyzed in this declaration fail to teach all limitations of the Challenged Claims under the proper claim construction.

1. "Open tip"

27. I have reviewed Mr. Drewry's deposition transcript and generally agree with his descriptions of the term "open tip" as a tip that has an opening to a void positioned behind the external abrading surface and allows for the removal of the tissue that was dislodged during the abrading and cutting process. *See Ex. 2004 at 35:17-21.* In my opinion, as used in the '129 Patent, the term an "open tip" means that the distal end of the abrading head contains an opening through which the tissue debris produced by the cutting procedure can enter inside the abrading head. Conversely, if the distal end of the abrading head does not have opening providing a passage for such debris, then a POSA would not describe that abrading head as having an "open tip."

28. Referring to the '129 Patent, the specification describes that when the open tip's "cutting edge 36 cuts bone tissue inside the SI Joint 3, the dislodged bone tissue falls into the void." Ex. 1001 at 6:31-38. This description indicates that the opening within the tip must enable the dislodged tissue to enter into the interior void within the abrading head.

29. The '129 Patent further describes that the void is located on the interior of the abrading head, in the space between its abrading surfaces and the lateral sides. *Id.* at 6:31-33 ("The abrading surfaces 33 and lateral sides 35 form a box-like abrading head 32 having *a void therein*"). With respect to this structural configuration of the abrading head, claim 1 recites a phrase "abrading surfaces on each of a first pair of opposing sides." Ex. 1001 at 13:1-2. In an abrading head having "a first pair of opposing sides," the interior void is the space between the interior surfaces of these opposing sides. In other words, because the abrading surfaces are located on the exterior of the first pair of the opposing sides, the interior void of the abrading head is located behind these abrading surfaces.

30. These characteristics of the "open tip" are clearly depicted in Fig. 14.

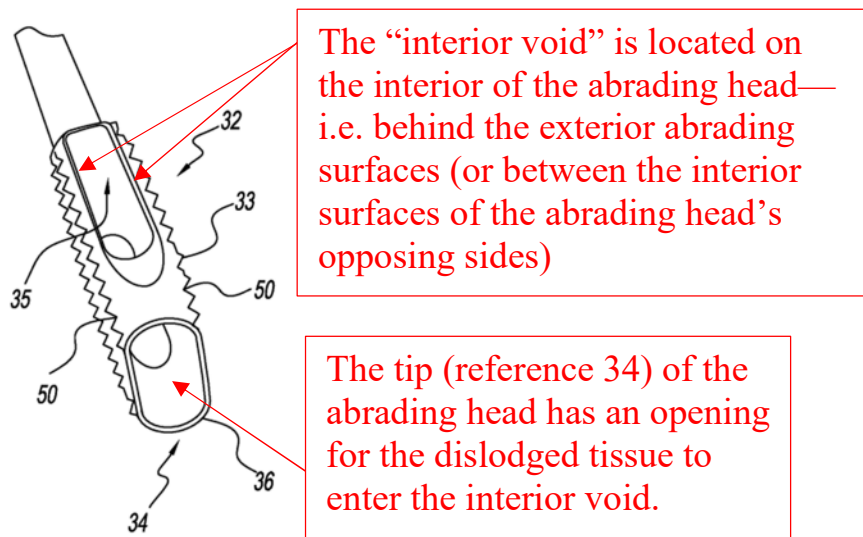


FIG. 14

31. Furthermore, as explained above, claim 1 of the ‘129 Patent uses the terminology “a first pair of opposing sides.” Ex. 1001 at 13:1-2. Defining the term “open tip” using this terminology a POSA would arrive at the following construction: in an abrading head having “a first pair of opposing sides,” the interior void is the space between the interior surfaces of these opposing sides. Alternatively, the interior position of the void can be described in terms of the “abrading surfaces.” In that case, because the abrading surfaces are located on the exterior of the opposing sides, the interior void of the abrading head is located behind the abrading surfaces.

32. Based on the foregoing, it is my opinion that the term “open tip” as used in the ‘129 Patent can be properly construed as “the tip of the abrading head is

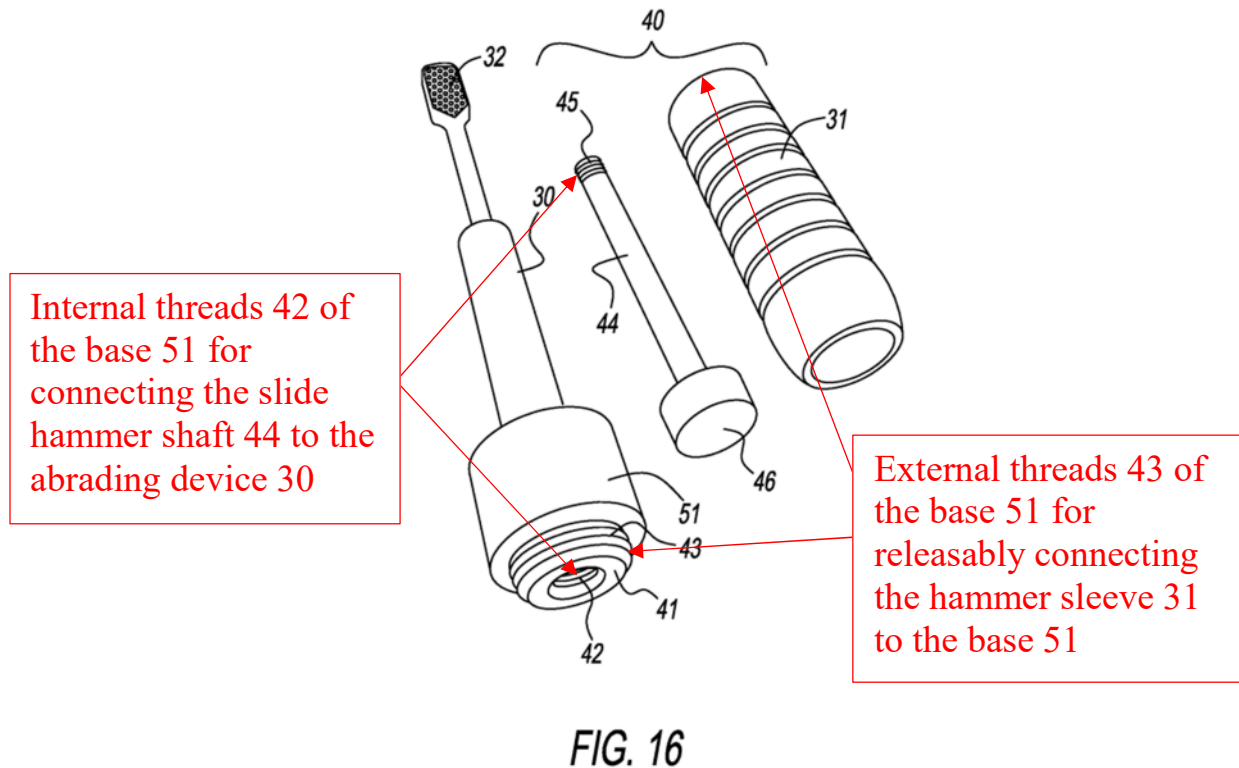
open to an interior void disposed behind the abrading surfaces of the abrading head and is configured to enable the dislodged tissue to enter into the interior void.”

2. “Releasing means”

33. I have been informed that “releasing means” is a means-plus-function limitation and that interpretation of a means-plus-function limitation is a two-step process requiring (1) identification of claim function and (2) identification of corresponding structure for performing that function.

34. I have been further informed that when a patent discloses only a single embodiment or location for the structure corresponding to a means-plus-function limitation, the construction of the structure must be limited to that embodiment. I have reviewed the ‘129 Patent and determined that the ‘129 Patent discloses only a single location for the structures associated with this means-plus-function limitation, which is at the interface between the base 51 and the distal end of the hammer sleeve 31. Ex. 1001 at Figs. 16-18 and 21. The ‘129 Patent does not disclose any other locations for these structures. Based on the foregoing, I believe that the limitation the “releasing means” is accurately construed as *a mating threaded connection, a quick disconnect attachment, a depressible tab, a latch, a clasp, a clip, or a clamp, disposed at an interface between a distal end of a hammer sleeve and a base for releasably connecting the distal end of the hammer sleeve to the base, and equivalent structures.*

35. With respect to the term “base” as it appears in the above construction of the limitation the “releasing means,” the ‘129 Patent makes it clear that the base is a dual-function component that connects the slide hammer assembly to the abrading device and releasably connects to the distal end of the hammer sleeve. Ex. 1001 at Figs. 16-17, 21. Figure 16 of the ‘129 Patent shows that the base has an internal thread 42 and an external thread 43 for accomplishing these functions. An annotated Figure 16 is reproduced below.



36. I have reviewed the Board’s preliminary construction of the term “base.” Inst. Dec. 24. It is my opinion that this construction is overly broad and

disassociates the term “base” from its core function as the structure connecting the slide hammer assembly to the abrading device. Furthermore, the Board’s preliminary construction also disassociates the structure of “base 51” from its sole location disclosed in the ‘129 Patent, which is between the proximal end of the surgical tool and the distal end of the slide hammer shaft. Indeed, if the “base 51” were relocated to another location relative to the abrading device, it would be unable to perform its connecting function. See Ex. 1001 at Fig. 16. Essentially, the Board’s construction of the term “base” is so broad that it fails to give this structural component a proper meaning.

37. Based on the foregoing, it is my opinion that the term “base,” within the context of the ‘129 Patent’s abrading device, should be construed as *a structure that connects a proximal end of an abrading device to a distal end of a shaft of the slide hammer assembly*.

VI. THE PRIOR ART CITED IN THE IPR PETITION DOES NOT TEACH OR SUGGEST ALL ELEMENTS OF CLAIM 1

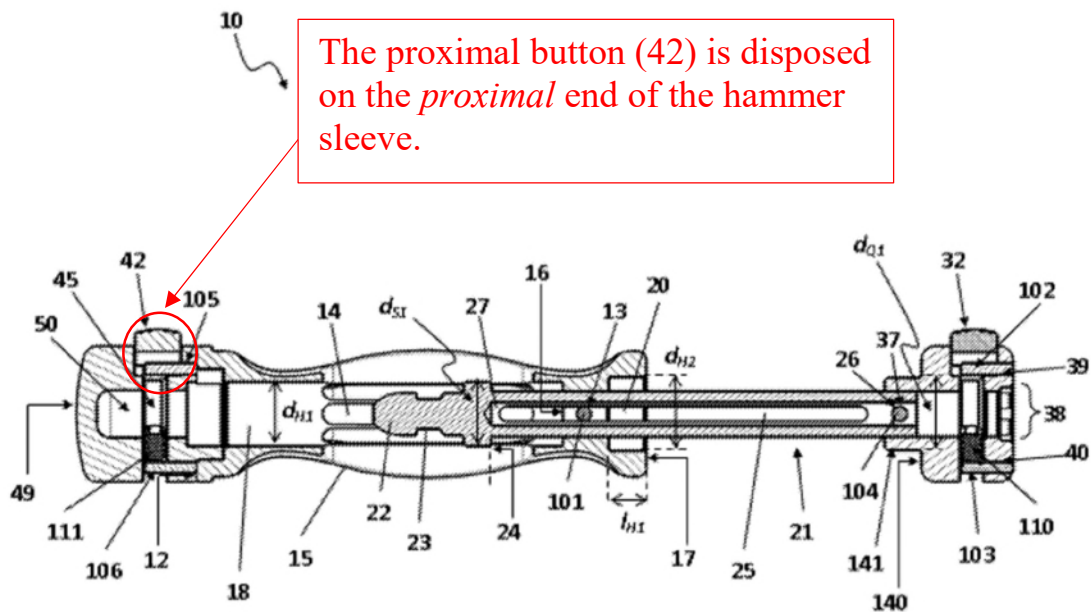
A. Under the correct claim construction, Sharma does not teach or suggest the “releasing means” element of claim 1

38. Sharma’s “locking mechanism 42” is the only prior art element cited in the Petition for the “releasing means” limitation of claim 1. Pet. 23, 48-50. Thus,

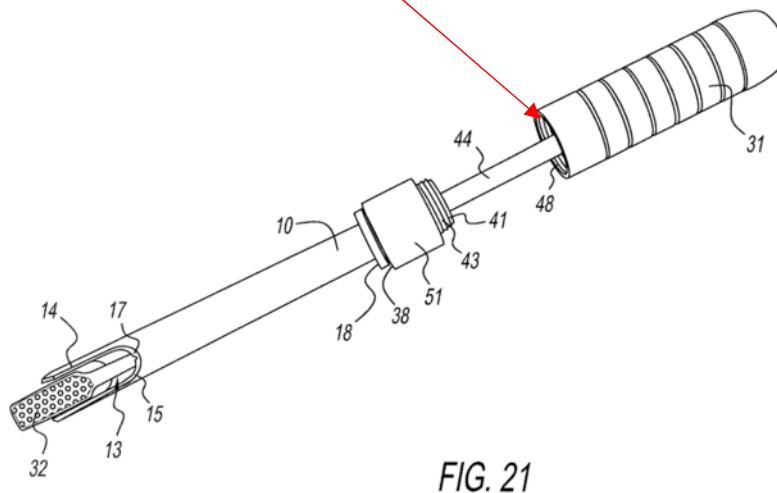
every invalidity ground asserted in the Petition hinges on whether Sharma's "locking mechanism 42" teaches or suggests the "releasing means" of claim 1. It does not.

39. Although Sharma's locking mechanism serves a similar function as the '129 Patent's "releasing means"—i.e., transitioning the slide hammer between locked and released positions—their structures and principles of operation are very different. In the '129 Patent, the sole location for the hammer-sleeve locking mechanism is the distal end of the hammer sleeve, whereas in Sharma, the location of the locking mechanism is at the proximal end of the hammer sleeve; these structural differences are significant and are clearly apparent when FIG. 4 of Sharma is compared against FIG. 21 of the '129 Patent, as shown below.

FIGURE 4

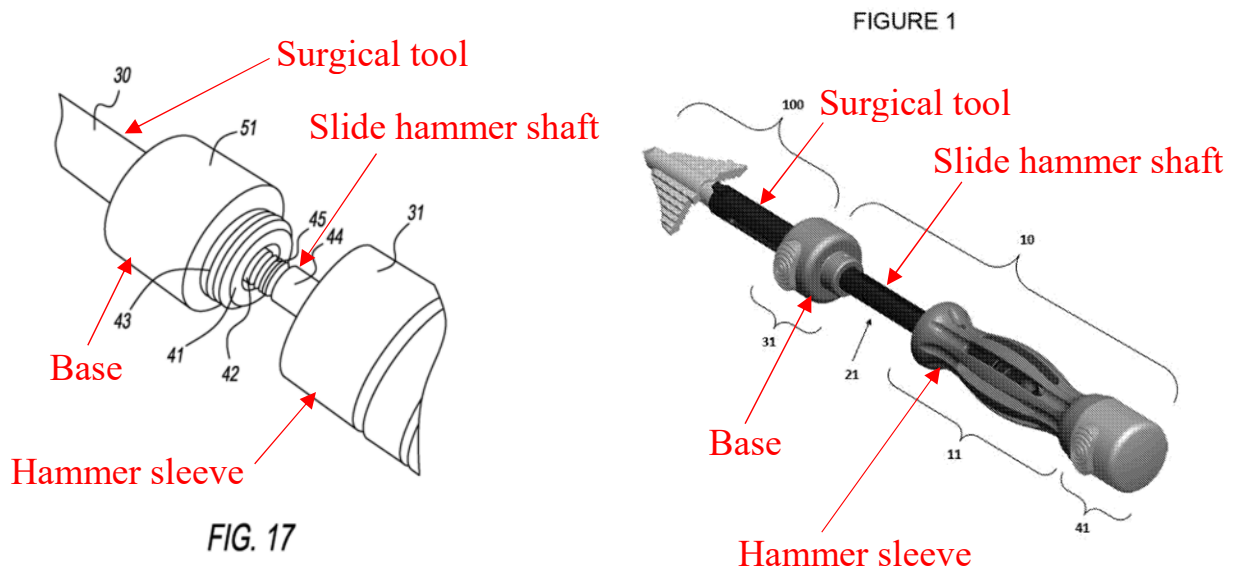


In the '129 Patent, the “releasing means”
is disposed on the distal end of the
hammer sleeve to the base.



40. As explained above, when the term “base” in the ‘129 Patent is construed according to its plain and ordinary meaning in the light of the specification of the ‘129 Patent, a proper construction must require that the “base” must connect the slide hammer assembly to the abrading device. In Sharma, the only structure that corresponds to the ‘129 Patent’s base is the “distal quick connect mechanism 31.” Ex. 1009 at Fig. 1. However, in Sharma the locking mechanism (42) releasably connects the hammer sleeve to the distal end of the shaft, rather than to the “distal quick connect mechanism 31,” (which is Sharma’s equivalent of the ‘129 Patent’s “base”). Accordingly, Sharma does not teach or suggest a structure that releasably connects a hammer sleeve to a base.

41. When comparing the abrading device in the ‘129 Patent with Sharma’s universal slap hammer, a POSA would understand that the slide hammer assemblies disclosed in Sharma and the ‘129 Patent have corresponding “base,” “hammer sleeve,” and “shaft” structures as shown below.



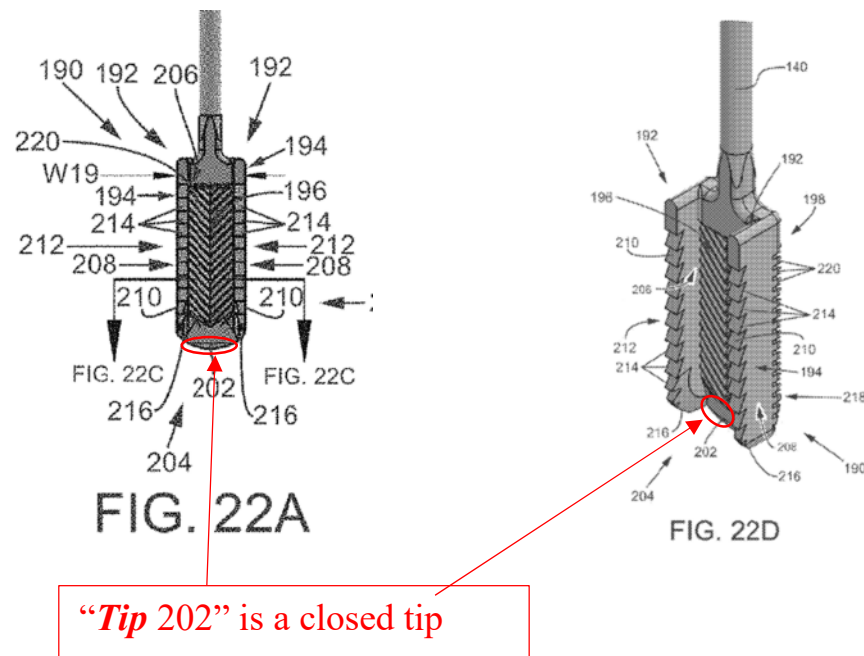
42. As clearly evident from the side-by-side comparison provided above, although the ‘129 Patent and Sharma use different terminology, a POSA would understand that the structure that Sharma calls “distal quick connect mechanism (31)” corresponds to the structure to which the ‘129 Patent refers to as the “base 51.” Regardless of their names, both structures are analogous in their function of connecting the distal end of the slide hammer shaft to the proximal end of the surgical tool, and are analogously positioned between the proximal end of the surgical tool and the distal end of the slide hammer shaft.

43. In other words, although the locking mechanisms disclosed in the ‘129 Patent and Sharma accomplish a same task of locking and releasing the hammer sleeve, their mechanisms for achieving this task have fundamentally different structures and operate under fundamentally different principles of operation. In the ‘129 Patent, the distal end of the hammer sleeve locks to the base (Ex. 1001, FIG. 21), whereas in Sharma, the proximal end of the hammer sleeve locks to the proximal end of the shaft (Ex. 1009, FIG. 4).

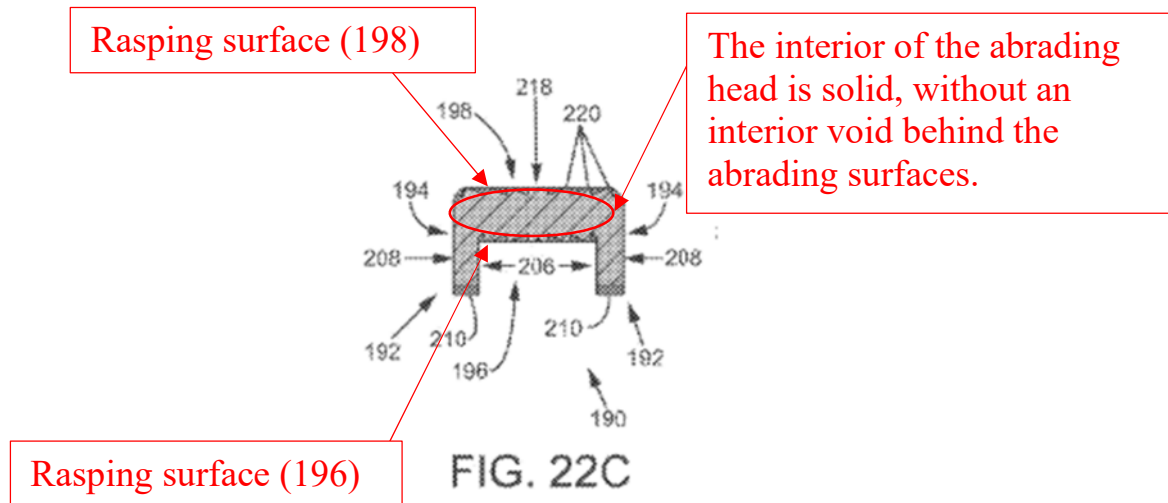
44. In conclusion, unless a POSA is constrained to applying the Board’s preliminary construction of the term “base”—which improperly disassociates the base from its core function and its only disclosed location—a POSA would understand that Sharma’s “proximal button 42” does not releasably connect the hammer sleeve to a base of the slide hammer assembly.

B. Donner’s dual-keel abrading head does not have an “open tip”

45. In Ground 1, for the limitation “open tip,” the Petitioner relies on the dual-keel abrading head in Donner (U.S. Pub. No. 2018/0036017) depicted in Figures 22A-22D. Donner identifies element 202 as the “tip.” Figs. 22A-22D of Donner clearly depict that the “tip 202” is a closed tip without an opening.



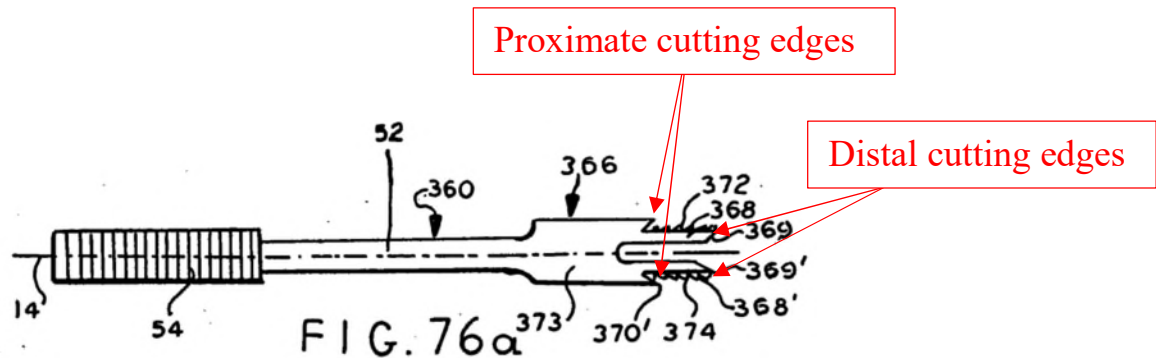
46. Indeed, Figure 22C of Donner unequivocally shows that the interior of Donner’s abrading head is solid, without a void. Furthermore, with respect to this embodiment of the abrading head, Donner teaches that both rasping surfaces (196 and 198) simultaneously contact the bone surfaces, which precludes the dislodged debris from exiting. Ex. 1006 at [0188]. This confirms that Donner’s dual-keel abrading head is a closed-tip instrument without an opening or an internal void. Accordingly, Donner’s dual-keel abrading head depicted in Figures 22A-22D does not teach or suggest the limitation “open tip.”



C. Martz does not teach the limitation “a cutting edge disposed at a leading edge of the open tip, the cutting edge configured to cut bone tissue in the sacroiliac joint”

47. In Grounds 2-5, for the limitation “cutting edge disposed at a leading edge,” the Petitioner relies on Martz’s chisel having two sets of cutting edges: distal cutting edges (369 and 369’) and proximal cutting edges (370 and 370’), as depicted in Martz’s Figs. 76a-76c. Martz teaches that the distal cutting edges are configured to “cut disc material from adjacent vertebrae while guiding the proximate cutting edges to meet and cut from adjacent vertebrae.” Ex. 1008 at [0304]. Analogously, if a POSA were to use Martz’s chisel to prepare an SI joint for an implant, Martz’s distal cutting edges would be used to remove soft tissue from the bone surface, while the proximal cutting edges would cut the actual bone tissue. Accordingly, the cutting edges that are disposed at the leading edges of Martz are configured to cut soft

tissue—not bone. Therefore, Martz does not teach the limitation of claim 1 requiring that the cutting edges disposed at a leading edge of the open tip must be configured to cut bone tissue.

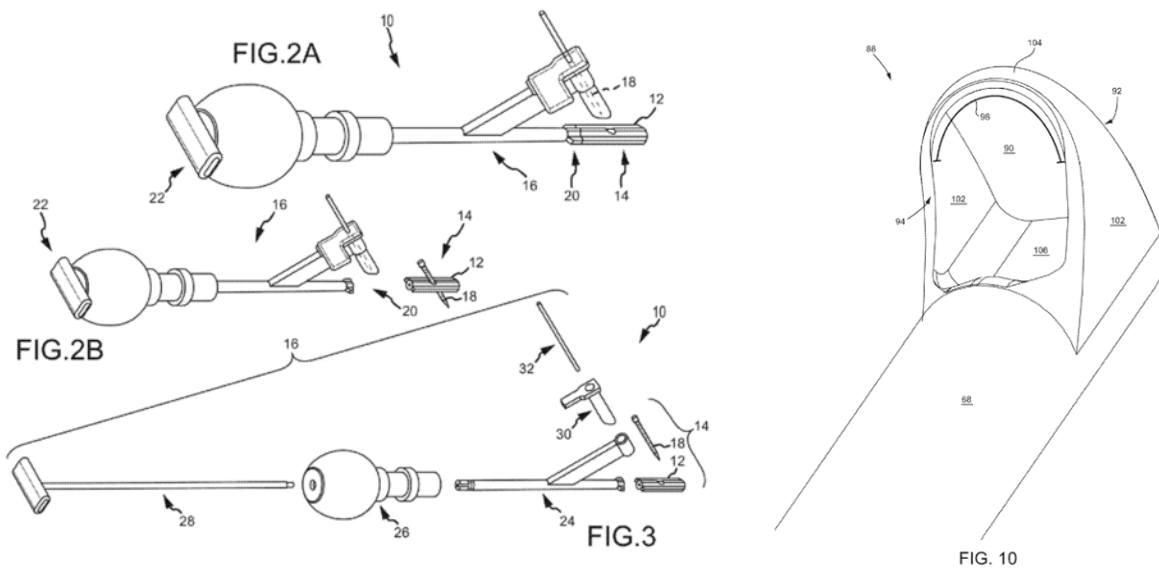


VII. NO MOTIVATION FOR THE COMPTON-DONNER-OTTE-SHARMA COMBINATION

48. In an attempt to show motivation to combine Compton (U.S. Pat. No. 10,218,841) and Donner, Petitioner asserted that there is “significant overlap in both instrumentation and methodology.” Pet. 51. This statement is false. Upon even a cursory comparison of Compton and Donner, a POSA would recognize that Compton’s and Donner’s tools, implants, and methods are vastly different. For example, Donner’s Figures 2-4 depict a dual-arm delivery tool (16) an implant with keels (12) which is secured within the joint using a transverse anchoring element (18), Figures 9-10 disclose cutting tools, Figures 11-12 depict a specialized “scooping” tool for gathering cartilage, Figure 51E depicts a bone tamp, and so on. In fact, Donner provides 107 figures and 30 pages of written description disclosing

Inter Partes Review of U.S. Patent No. 11,020,129
Declaration of Dr. Christopher J. Bovinet, D.O.

its various tools, implants, and their methods of use. None of these complex tools or implants are present in Compton. Likewise, Compton's joint finder, cannula, broach, and rectangular implant are not present in Donner. As an example, just a few of Donner's instruments that are not present in Compton are reproduced below to illustrate the falsehood of Petitioner's unsupported statement regarding the overlap in Compton's and Donner's instruments and techniques.



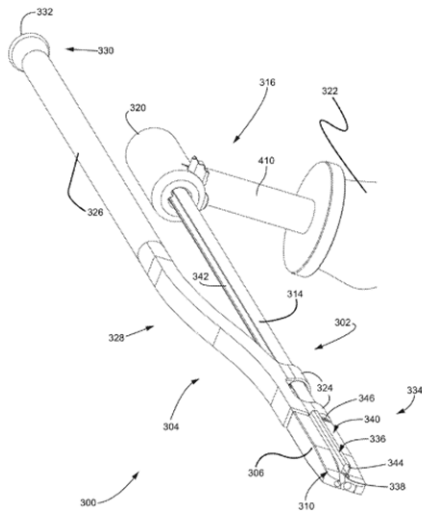


FIG. 28

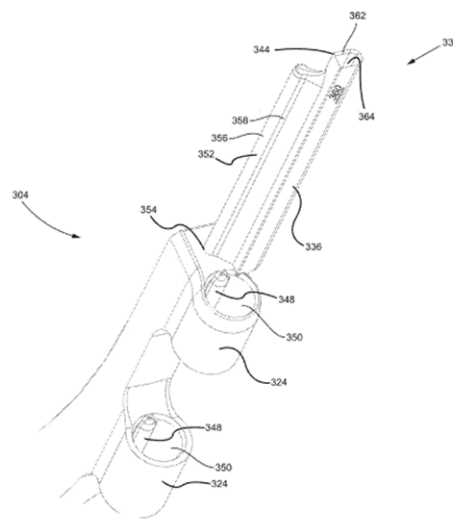


FIG. 30

VIII. RIGHT TO SUPPLEMENT

49. The opinions in this declaration are based upon my work to date. I reserve the right to supplement this declaration should additional information come to light that bears on my opinions contained herein. I reserve the right to consider and comment on additional evidence, if presented by experts for the Petitioner. I reserve the right to add, to alter, or to delete my opinions and my declaration upon discovery of any additional information and I reserve the right to make such changes as may be deemed necessary.

IX. CONCLUSION

50. For the foregoing reasons, I believe that claims 1, 2, 9, and 10 of the '129 Patent are patentable in over the prior art cited in the Petition.

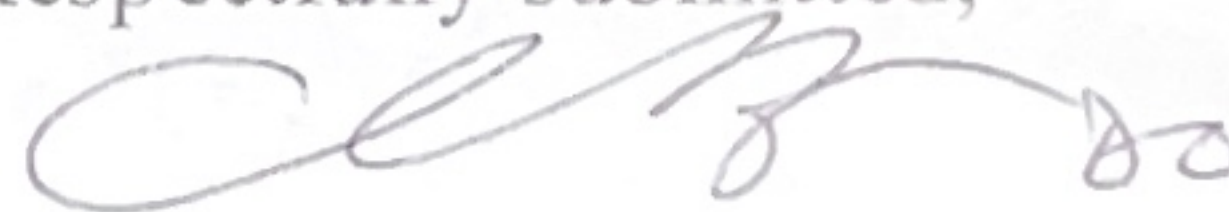
Inter Partes Review of U.S. Patent No. 11,020,129

Declaration of Dr. Christopher J. Bovinet, D.O.

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 are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: December 22, 2023

Respectfully submitted,



Christopher J. Bovinet, D.O.