IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

MEDIDEA, L.L.C. Plaintiff, v. DEPUY ORTHOPAEDICS, INC., DEPUY SYNTHES PRODUCTS, INC. and DEPUY SYNTHES SALES, INC. d/b/a DEPUY SYNTHES JOINT RECONSTRUCTION Defendant.	Civil Action No. 1:16-cv-10638 **TRIAL BY JURY DEMANDED**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, MEDIDEA, L.L.C., by its attorneys, hereby complains against Defendants DePuy Orthopaedics, Inc., DePuy Synthes Products, Inc. and DePuy Synthes Sales, Inc. d/b/a DePuy Synthes Joint Reconstruction as follows:

I. PARTIES AND BACKGROUND

1. Plaintiff, MEDIDEA, L.L.C. ("MEDIDEA") is a limited liability company organized and existing under the laws of the State of Michigan.

2. On November 15, 2016, United States Patent Number 9,492,280 ("the '280 Patent") entitled "Multiple-Cam, Posterior-Stabilized Knee Prosthesis" was duly and lawfully issued by the United States Patent and Trademark Office ("USPTO") to MEDIDEA. A true and correct copy of the '280 Patent is attached as **Exhibit 1**.

3. MEDIDEA is the assignee of the '280 Patent and holds the rights to sue and recover for past, present and future infringement thereof.

4. On May 13, 2014, United States Patent Number 8,721,730 ("the '730 Patent") entitled "Multiple-Cam, Posterior-Stabilized Knee Prosthesis" was duly and lawfully issued by the United States Patent and Trademark Office ("USPTO") to MEDIDEA. A true and correct copy of the '730 Patent is attached as **Exhibit 2**.

5. MEDIDEA is the assignee of the '730 Patent and holds the rights to sue and recover for past, present and future infringement thereof.

6. On September 25, 2012, United States Patent Number 8,273,132 ("the '132 Patent") entitled "Multiple-Cam, Posterior-Stabilized Knee Prosthesis" was duly and lawfully issued by the USPTO to MEDIDEA. A true and correct copy of the '132 Patent is attached as **Exhibit 3**.

7. MEDIDEA is the assignee of the '132 Patent and holds the rights to sue and recover for past, present and future infringement thereof.

8. The '280, '730 and '132 Patents all claim priority to the application which matured into U.S. Patent Number 6,558,426 ("the '426 Patent") entitled "Multiple-Cam, Posterior-Stabilized Knee Prosthesis."

9. The '426 Patent was duly and lawfully issued by the USPTO to MEDIDEA on May 6, 2003. A true and correct copy of the '426 Patent is attached as **Exhibit 4**.

10. MEDIDEA is the assignee of the '426 Patent and holds the rights to sue and recover for past, present and future infringement thereof.

11. The '280, '730, '132 and '426 Patents are collectively referred to herein as "the Patents-in-Suit."

12. Dr. Michael A. Masini, MD, ("Dr. Masini") the sole named inventor of the Patents-in-Suit, is a board certified orthopedic surgeon with a special interest and training in total joint replacement and complex joint revision surgery. Dr. Masini, a prolific inventor, is named on over fifty United States patents which have been widely licensed throughout the orthopedic device industry.

13. Defendant DePuy Orthopaedics, Inc. ("DOI") is a corporation organized and existing under the laws of the State of Indiana with its principal place of business located at 700 Orthopaedic Drive, Warsaw, Indiana 46582. DOI is a wholly-owned subsidiary of Johnson & Johnson, a publicly traded company.

14. Defendant DePuy Synthes Products, Inc. ("DSP") is a corporation organized and existing under the laws of the State of Delaware with its principal place of business located at 325 Paramount Drive, Raynham, Massachusetts 02767. DSP is division of DOI.

15. DSP makes, imports, distributes, sells or offers for sale certain total knee replacement prostheses, such as, for example, the Attune® Knee System.

16. Defendant DePuy Synthes Sales, Inc. d/b/a DePuy Synthes Joint Reconstruction ("DSS") is a corporation organized and existing under the laws of the State of Massachusetts with its principal place of business located at 325 Paramount Drive, Raynham, Massachusetts 02767. DSS is a division of DOI.

17. DSS makes, imports, distributes, sells or offers for sale certain total knee replacement prostheses, such as, for example, the Attune® Knee System.

18. DOI, DSP and DSS are collectively referred to herein as "DePuy."

19. The Attune® Knee System is available for use with Cruciate Retaining (CR) and Posterior Stabilized (PS) total knee replacement procedures. DePuy publicly distributes a product brochure for the Attune® PS and CR Knee Systems, a true and correct copy of which is attached as **Exhibit 5**.

20. On or about February or March 2003, Dr. Masini met in person with Dan Auger, at the time the Director for Knees, Research and Development at DePuy and presented the disclosure of what was to be issued as the '426 Patent and offered to license the '426 Patent upon issuance and all future divisionals and continuations therefrom to DePuy.

21. On March 24, 2003, DePuy, through Dan Auger, acknowledged that it had been "considering and evaluating" the disclosure of what was to be issued as the '426 Patent, but declined the offered opportunity to license the '426 Patent upon issuance and any future divisionals and continuations therefrom. A true and correct copy of DePuy's letter to Dr. Masini dated March 24, 2003 is attached as **Exhibit 6**.

22. On June 30, 2008, about five years after Dr. Masini's disclosure to DePuy, U.S. Patent Application No. 12/165,582 ("the '582 Application") was filed by Joseph G. Wyss *et al*. and the '582 Application was assigned to DePuy Products, Inc., an affiliate of DePuy. On June 26, 2012, the application issued as U.S. Patent No. 8,206,451 (the "Wyss

Patent") and directed at a "posterior stabilized knee orthopaedic prosthesis." A true and correct copy of the Wyss Patent is attached as **Exhibit 7**.

23. The Wyss Patent cites to the '426 Patent (Masini) as prior art and it was disclosed to the USPTO during the prosecution of the '582 Application as part of an Information Disclosure Statement filed on January 11, 2012 ("IDS"). A true and correct copy of the IDS attached as **Exhibit 8**.

24. The Abstract of the '426 Patent summarizes the key advantage of the disclosure as:

> A distal femoral knee-replacement component provides additional points of cam action to facilitate a more normal rollback while inhibiting initial translation which could lead to increased wear and sub-optimal patella femoral mechanics. The inventive component preferably includes additional points of cam action, useable separately or together, to prevent early translation at the initiation of flexion, and a distinct point of cam action to prevent a dislocation of the femoral component over the tibial post which often occurs in cruciate-substituting designs.

See e.g., Ex. 4 at column 2, lines 34 to 42.

25. The disclosure of the Patents-in-suit further states that in prior art "translation is allowed to occur which could lead to premature wear." See e.g., Ex. 4 at column 2, lines 1 to 10. In contrast:

> In the preferred embodiment, the invention facilitates a more normal rollback while inhibiting initial translation which could lead to increased wear and sub-optimal patella femoral mechanics. To accomplish this goal, the inventive component includes a distinct point of cam action to prevent early translation at the initiation of flexion, and a distinct point of cam action to prevent a dislocation of the femoral component over the tibial post which is known to occur in cruciate-substituting designs.

See, e.g., Ex. 4 at column 2, lines 34 to 42.

26. On March 20, 2013, about ten years after Masini's disclosure to DePuy, DePuy issued a press release widely introducing its "latest innovation in total knee replacement—the ATTUNE™ Knee System—at the 2013 American Academy of Orthopedic Surgeons (AAOS) annual meeting in Chicago." A true and correct copy of the press release is attached as **Exhibit 9**.

27. The March 20, 2013 press release further states that the Attune® Knee System was "designed to provide better range of motion and address the unstable feeling some patients experience during everyday activities, such as stair descent and bending." According to DePuy, its "proprietary technologies include: […] SOFCAM™ Contact: An S-curve design that provides a smooth engagement for stability through flexion, while reducing stresses placed on the implant […]." See Ex. 9.

28. The advertised benefits and advantages of the Attune® Knee System are the same benefits and advantages contained in the disclosure of what was to be issued as the '426 Patent and which was disclosed by Dr. Masini to Dan Auger at DePuy on or about February or March 2003. See supra at ¶¶ 20, 24 to 25.

29. In a product brochure for the Attune® Knee System, DePuy further promotes the System as benefitting from "the patented s-shape of the cam and spine." See Figures 1a and 1b below.

SOFCAM Contact

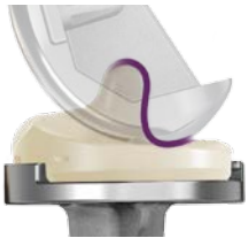
The **SOFCAM** Contact of the ATTUNE PS Knee provides contact mechanics for stability throughout flexion. The ATTUNE GRADIUS Curve introduces the femoral component slowly into engagement with the tibial spine, providing a smooth transition from condylar control to cam/spine control.[7,8] ***This smooth engagement also provides gradual rollback of the femoral component and stable motion throughout flexion.***[7,8]

The patented s-shape of the cam and spine provides a large contact area as the cam initially engages the spine, with the cam/spine transitioning smoothly down the spine as the knee moves further into flexion. The low contact position in high flexion directs the forces through the thickest portion of the tibial insert.[7,8]

Figs 1a and 1b - Excerpts from Ex. 5 at p. 7.

30. On information and belief, DePuy's claim of patent protection for its Attune® PS Knee System relies, at least in part, on the fact that the Attune® Knee System embodies certain aspects of the disclosure and at least one claim of the Wyss Patent.

31. DePuy also promotes its product in its "Attune® Knee System – Value Analysis Brief" as shown in Figure 2 below. A true and correct copy of the Value Analysis Brief is attached as **Exhibit 10**.



SOFCAM™ Contact
For the Posterior Stabilized design, the interaction between the cam and spine, the articular surface geometry, and the collateral ligaments is complex and essential to the function of the knee in deep flexion. The proprietary s-curve design of the SOFCAM™ Contact provides a smooth engagement for gradual femoral rollback and stability in flexion, while reducing the forces transferred to the tibial spine.[16]

Fig. 2 - Excerpt from Ex. 10 at p. 3.

32. A press article, dated March 17, 2014, includes the phrase, "[a]fter introducing the Attune system a year ago and implanting more than 31,000 of the devices during that time[.]" A true and correct copy of the press article is attached as **Exhibit 11**.

II. JURISDICTION AND VENUE

33. This Court has exclusive subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, including 35 U.S.C. § 271 *et seq*. This Court has personal jurisdiction over DePuy because it has committed acts giving rise to this action within Illinois and this judicial district and has established minimum contacts within the forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice.

34. Venue properly lies in the Northern District of Illinois pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b), because DePuy has committed acts within this judicial district giving rise to this action, and DePuy "resides" in this District as it is subject to personal jurisdiction in this District. Venue is also appropriate because DePuy is doing business in this judicial district, including one or more of the infringing acts of offering for sale, selling, using infringing products, or providing service and support to DePuy's customers in this District and it does so through established distribution channels.

III. CLAIMS

COUNT I – INFRINGEMENT OF THE '426 PATENT

35. MEDIDEA realleges and incorporates by reference the allegations set forth in Paragraphs 1 through 34 above as if fully set forth herein.

36. Claim 9 of the '426 Patent requires:

> *A distal femoral knee-replacement component configured for use with a tibial component having a bearing surface and superior tibial post with a posterior aspect, the distal femoral component comprising:*
>
> > *a body having a pair of medial and lateral condylar protrusions and an intercondylar region there between dimensioned to receive the tibial post; and*
> >
> > *a structure providing more than one physically separate and discontinuous points of cam action as the knee moves from extension to flexion*.

See Ex. 4 at column 5, lines 6 to 15.

37. In violation of 35 U.S.C. § 271, DePuy is and has been directly infringing the '426 Patent by, among other activities, making, using, importing, offering for sale, selling, providing, maintaining or supporting, without license or authority, products

falling within the scope of one or more claims of the '426 Patent. Such products include, without limitation, certain total knee prostheses, such as, for example, the Attune® PS Knee System and ancillary products (the "Accused Product").

38. Subject to additional information obtained during discovery, the court's constructions of any patent terms about whose meaning the parties disagree, and the detailed initial and final infringement contentions MEDIDEA will make pursuant to this district's Local Patent Rules (*see, e.g.* LPR 2.2, 3.1), the Accused Product infringes at least independent claim 9 of the '426 Patent as described in the following paragraphs.

39. The preamble of claim 9 of the '426 Patent requires "[a] distal femoral knee-replacement component configured for use with a tibial component having a bearing surface and superior tibial post with a posterior aspect." See Ex. 4 at column 5, lines 6 to 9. The requirements of the preamble are present in the Accused Product as shown in Figures 3 and 4 below:

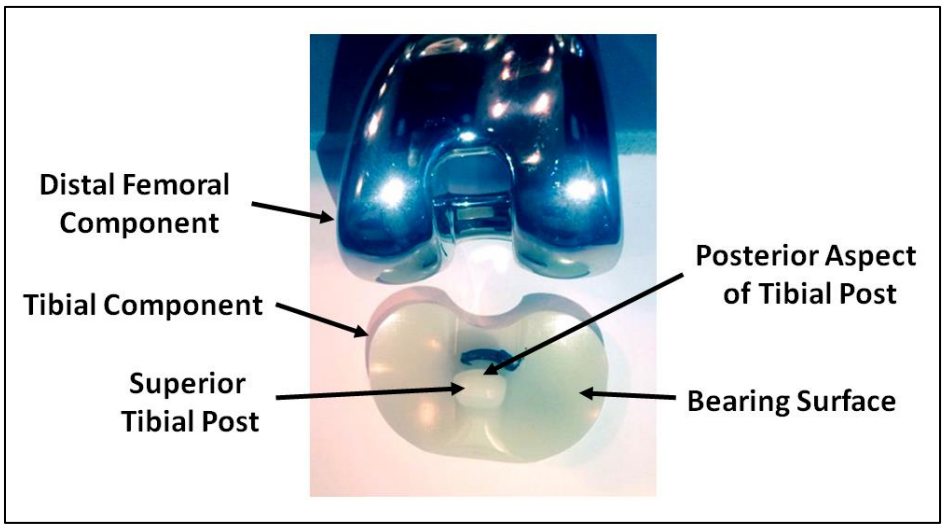


Fig. 3 - Annotated photograph of Accused Product.

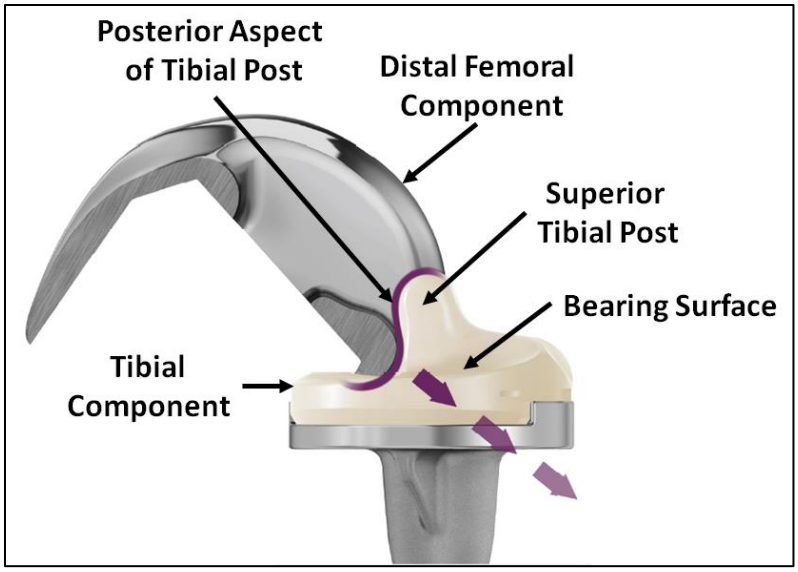


Fig. 4 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

40. The first element of claim 9 of the '426 Patent requires that the distal femoral component comprises "a body having a pair of medial and lateral condylar protrusions and an intercondylar region therebetween dimensioned to receive the tibial post." See Ex. at column 5, lines 10 to 12. The first element is present in the Accused Product as shown in Figures 5 and 6 below:

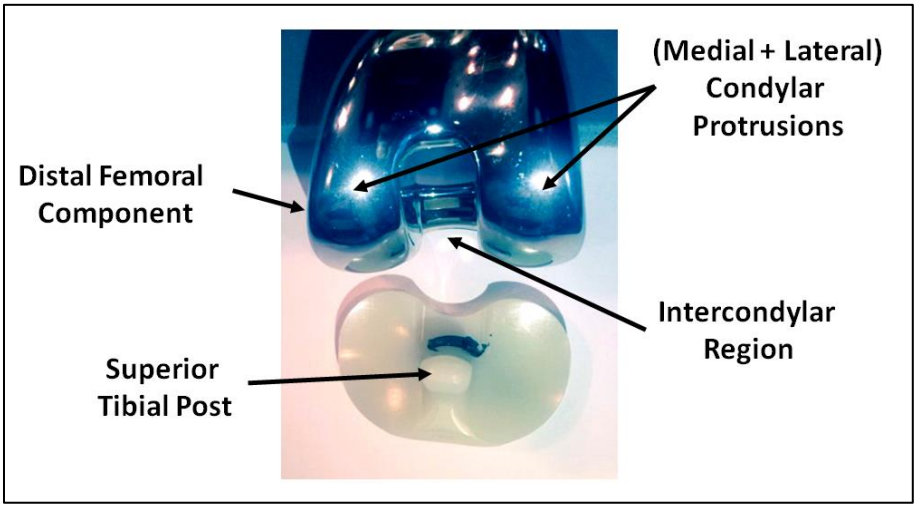


Fig. 5 - Annotated photograph of Accused Product.

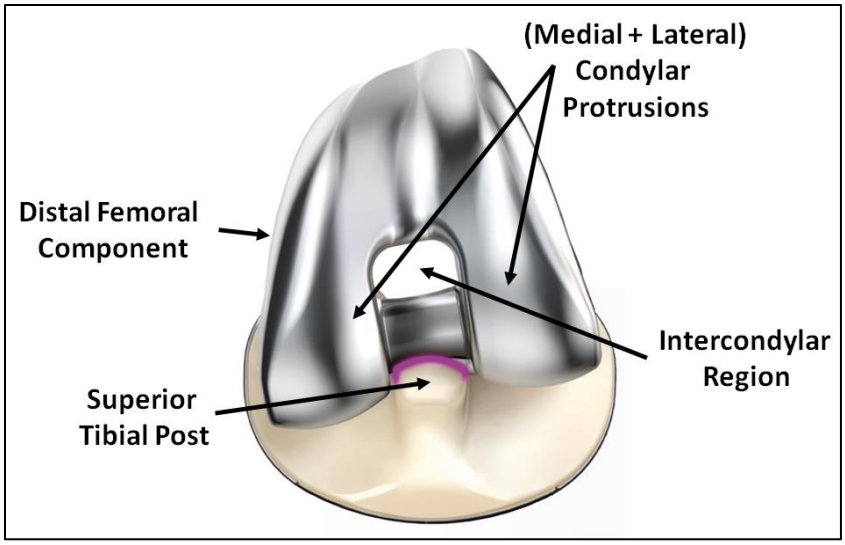


Fig. 6 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

41. The second element of claim 9 of the '426 Patent requires that the distal femoral component also comprises "a structure providing more than one physically separate and discontinuous points of cam action as the knee moves from extension to flexion." See Ex. 4 at column 5, lines 13 to 15. The Accused Product has a structure, i.e., a cam surface that provides at least two separate and discontinuous points of cam action as shown in annotated Figure 7 below. In particular, the structure has a first convex cam surface and a second convex cam surface providing two points of cam action that are physically separate from one another. In addition, the structure provides points of cam action that are discontinuous because they are separated by an intermediate cam surface structure and engage the tibial post at different degrees of flexion.

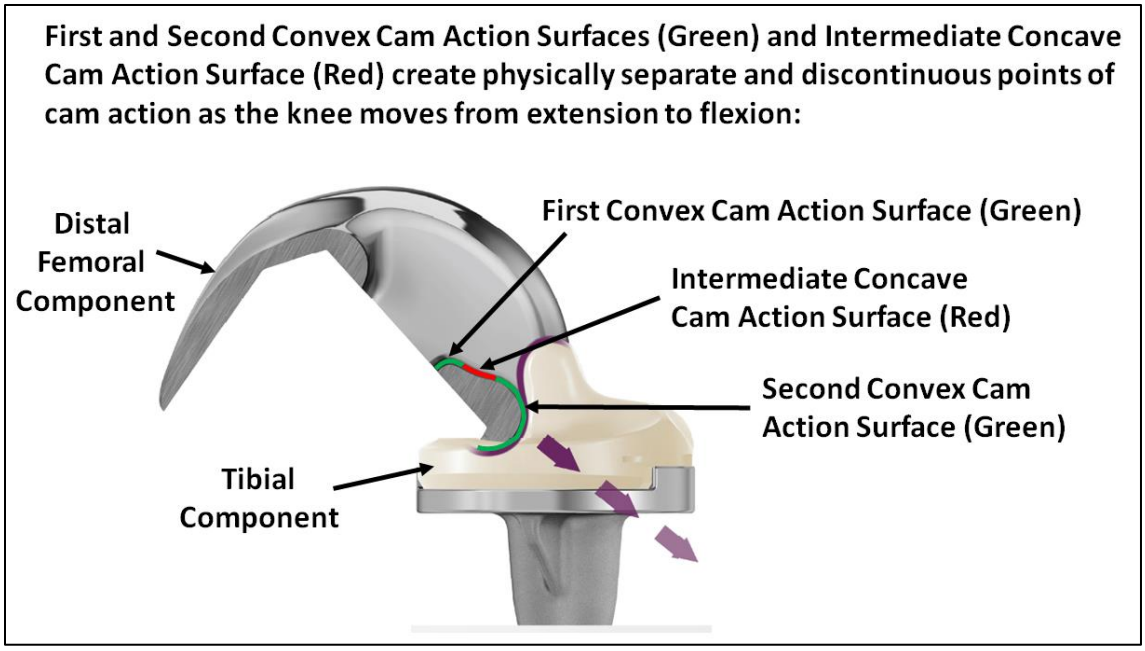


Fig. 7 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

42. As a result of DePuy's unlawful infringement of the '426 Patent, MEDIDEA has suffered and will continue to suffer damage. Under 35 U.S.C. § 284, MEDIDEA is entitled to recover from DePuy the damages suffered by MEDIDEA as a result of DePuy's infringement of the '426 Patent.

43. On information and belief, DePuy intends to continue its unlawful infringing activity, and DePuy's infringement on MEDIDEA's exclusive rights under the '426 Patent will continue to damage MEDIDEA causing irreparable harm, for which there is no adequate remedy of law, unless enjoined by this Court under 35 U.S.C. § 283.

44. DePuy has had knowledge of the '426 Patent since at least March 2003.

45. By continuing the infringement after the first sale of the Attune® PS Knee System, or at least after March 20, 2013, DePuy has engaged and continues to engage in willful and deliberate infringement of the '426 Patent. Despite knowing that MEDIDEA had offered DePuy a license opportunity under the '426 Patent, which DePuy had

earlier declined, DePuy never contacted MEDIDEA to request a license or other authorization to directly or indirectly make, use, sell, or offer for sale in the United States or import into the United States the accused Attune® PS Knee System. Instead, DePuy elected to appropriate the inventions disclosed and claimed in the '426 Patent, and then at least use, offer to sell or sell the accused Attune® PS Knee System in the United States, deliberately infringing the '426 Patent. DePuy's egregious conduct justifies an increase of three times the damages to be assessed pursuant to 35 U.S.C. § 284, and further qualifies this action as an exceptional case supporting an award of reasonable attorneys' fees pursuant to 35 U.S.C. § 285.

COUNT II – INFRINGEMENT OF THE '280 PATENT

46. MEDIDEA realleges and incorporates by reference the allegations set forth in Paragraphs 1 through 45 above as if fully set forth herein.

47. Claim 1 of the '280 Patent requires:

A total knee replacement system, comprising:

a tibial component having a tibial post with a posterior surface;

a femoral component having medial and lateral condylar protrusions which form separated bearing surfaces configured to articulate with the tibial component, the femoral component further including an intercondylar femoral cam mechanism configured to articulate with the posterior surface of the tibial post;

wherein a majority of the posterior surface of the tibial post is concave in a sagittal plane, defined as a vertical plane extending from front to back;

wherein the cam mechanism of the femoral component has a superior convex portion, a concave central portion, and an inferior convex posterior portion;

wherein the inferior convex posterior portion contacts the posterior surface of the tibial post at or before 90 degrees of flexion;

> *wherein at least a portion of the posterior surface of the tibial post is convex in a transverse (horizontal) plane; and*
>
> *wherein at least a portion of the cam mechanism of the femoral component is concave in the transverse (horizontal) plane.*

See Ex. 1 at column 5, line 9 to column 6, line 12.

48. In violation of 35 U.S.C. § 271, DePuy is and has been directly infringing the '280 Patent by, among other activities, making, using, importing, offering for sale, selling, providing, maintaining or supporting, without license or authority, products falling within the scope of one or more claims of the '280 Patent. Such products include, without limitation, certain total knee prostheses, such as, for example, the Attune® PS Knee System and ancillary products (the "Accused Product").

49. Subject to additional information obtained during discovery, the court's constructions of any patent terms about whose meaning the parties disagree, and the detailed initial and final infringement contentions MEDIDEA will make pursuant to this district's Local Patent Rules (*see, e.g.* LPR 2.2, 3.1), the Accused Product infringes independent claim 1 and dependent claim 2 of the '280 Patent as described in the following paragraphs.

Independent Claim 1 of the '280 Patent

50. The Accused Product is a total knee replacement system as required by the preamble of claim 1 of the '280 Patent.

51. The first element of claim 1 of the '280 Patent requires that the claimed system comprises "a tibial component having a tibial post with a posterior surface." See

Ex. 1 at column 5, lines 10 to 11. This element is present in the Accused Product as shown in Figures 8 and 9 below:

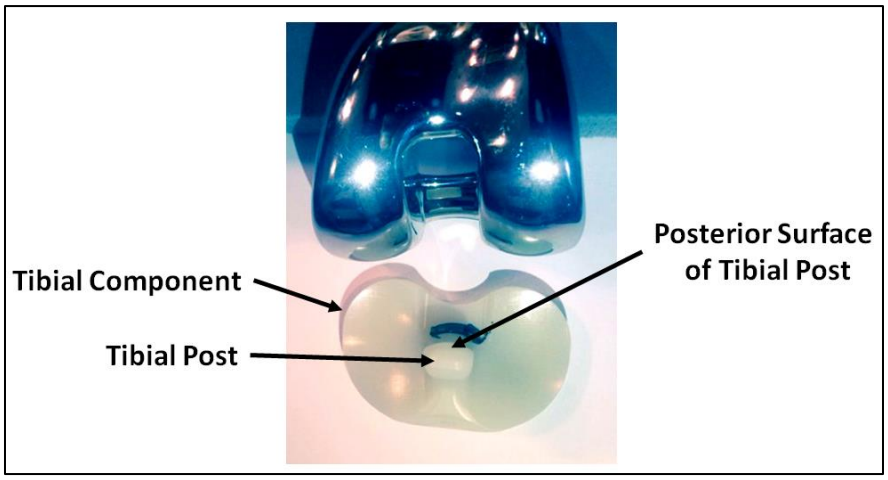


Fig. 8 - Annotated photograph of Accused Product.

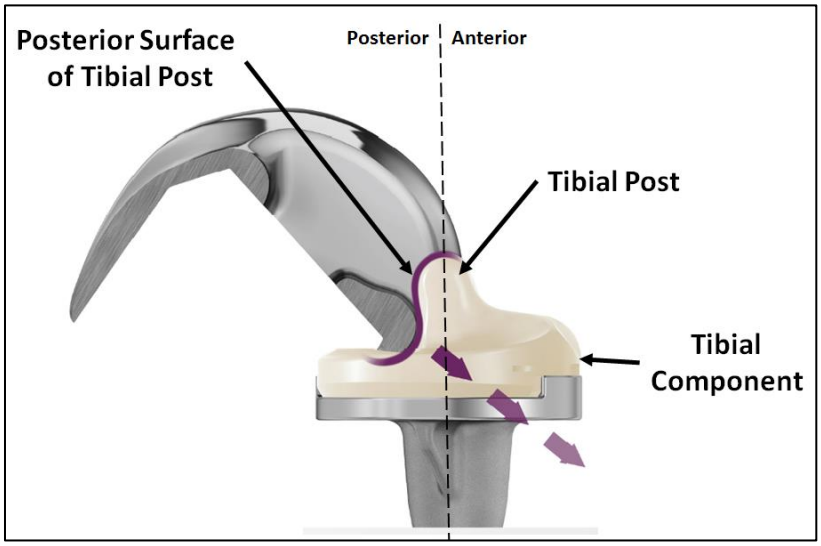


Fig. 9 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

52. The second element of claim 1 of the '280 Patent requires that the claimed system comprises "a femoral component having medial and lateral condylar protrusions which form separated bearing surfaces configured to articulate with the tibial component, the femoral component further including an intercondylar femoral cam mechanism configured to articulate with the posterior surface of the tibial post."

See Ex. 1 at column 5, lines 12 to 17. This element is present in the Accused Product as shown in Figures 10 and 11 below:

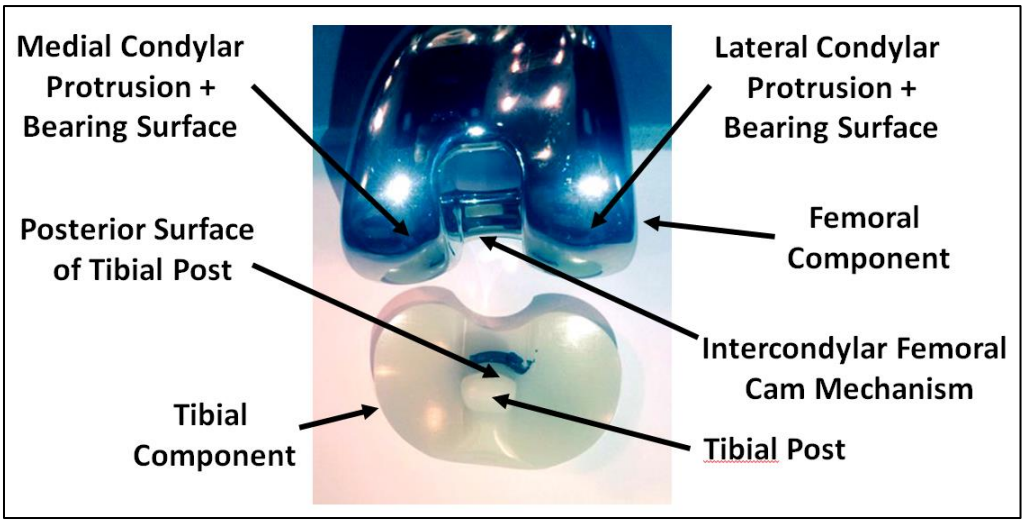


Fig. 10 - Annotated photograph of Accused Product.

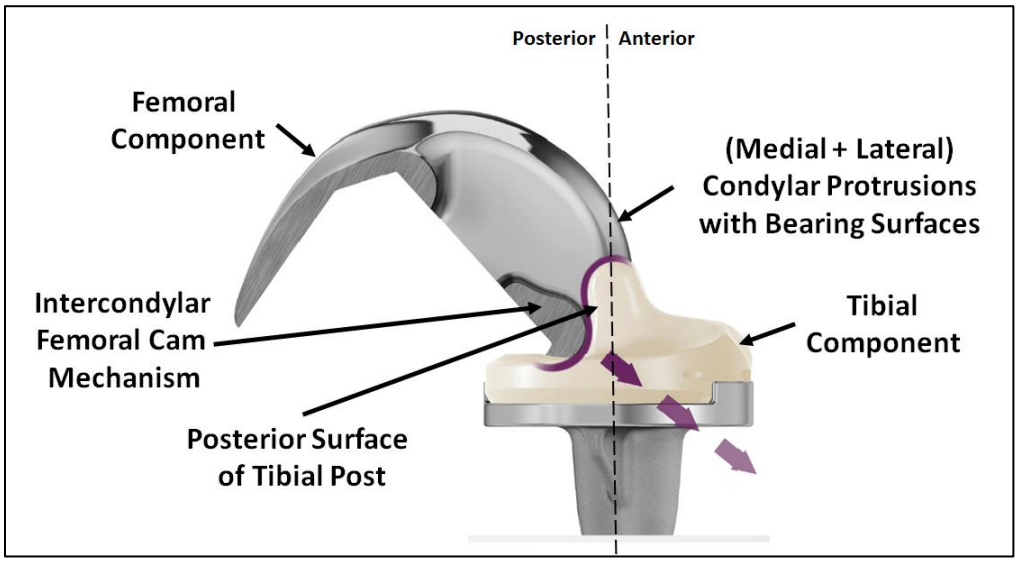


Fig. 11 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

53. The third element of claim 1 of the '280 Patent requires that "a majority of the posterior surface of the tibial post is concave in a sagittal plane, defined as a vertical plane extending from front to back." See Ex. 1 at column 5, lines 18 to 20. This element is present in the Accused Product as shown in Figure 12 below:

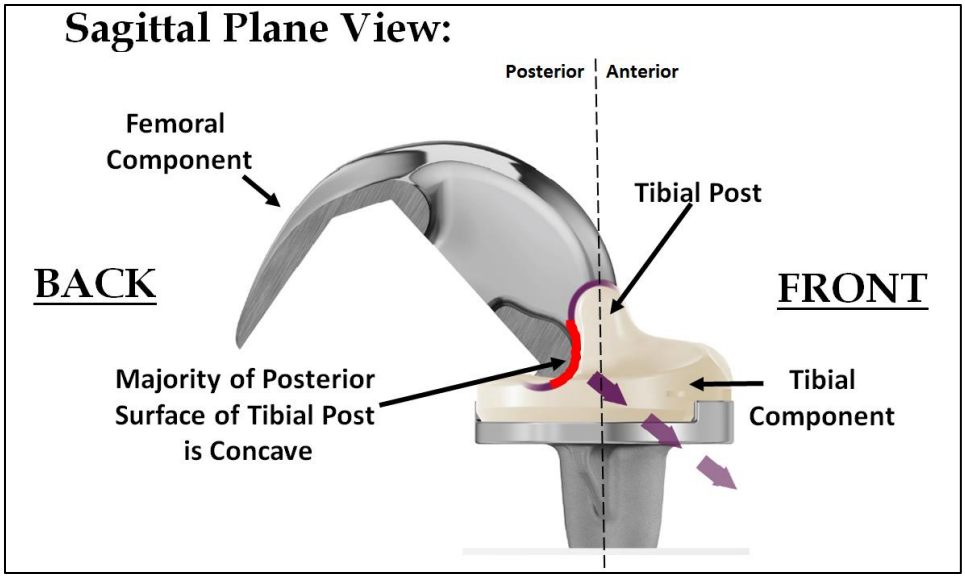


Fig. 12 - Annotated excerpt from Ex. 5 at p. 7
(Red highlight added, purple highlight in original).

54. The fourth element of claim 1 of the '280 Patent requires that "the cam mechanism of the femoral component has a [1] superior convex portion, a [2] concave central portion, and an [3] inferior convex posterior portion." See Ex. 1 at column 6, lines 1 to 3. This element is present in the Accused Product as shown in Figure 13 below:

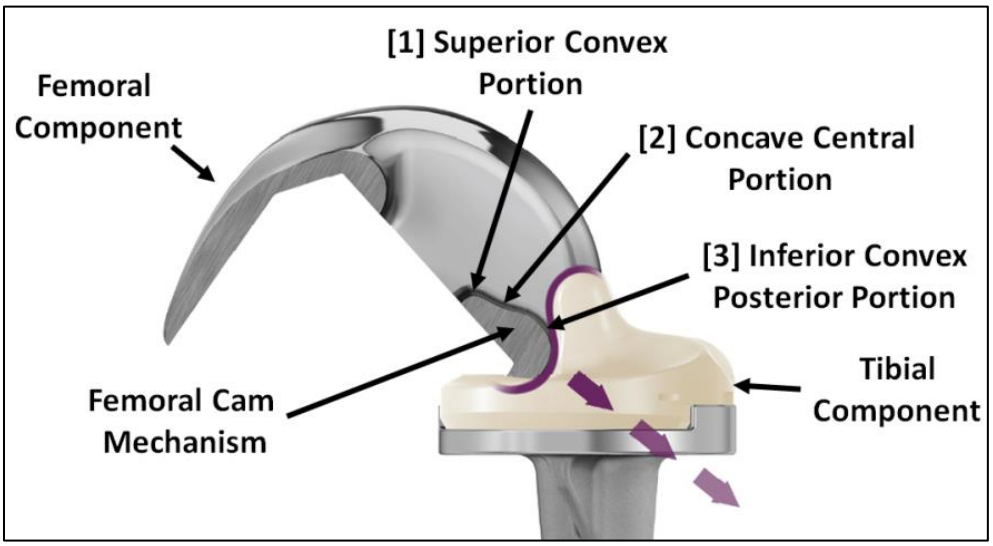


Fig. 13 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

55. The fifth element of claim 1 of the '280 Patent requires that "the inferior convex posterior portion contacts the posterior surface of the tibial post at or before 90 degrees of flexion." See Ex. 1 at column 6, lines 4 to 6. As shown in Figure 14 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

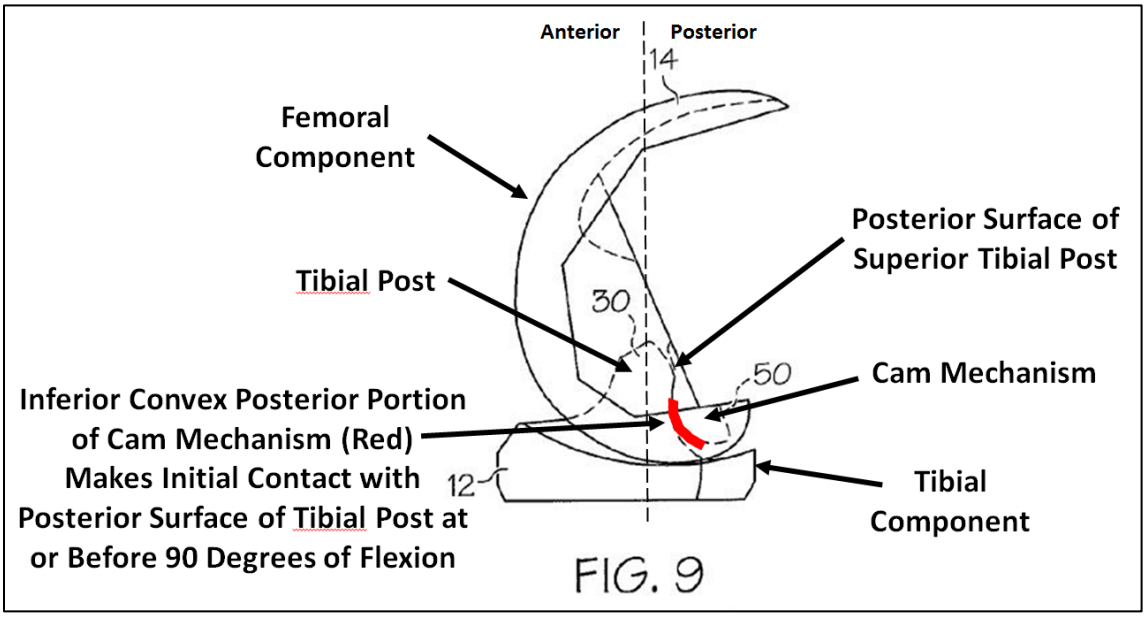


Fig. 14 – Annotated excerpt from Ex. 7 at Fig. 9 (numerals in original).

56. Further with regard to the fifth element of claim 1 of the '280 Patent, on information and belief, the Accused Product embodies the operation disclosed in Figure 9 of the Wyss Patent (see Fig. 14 above) and with respect to the disclosed operation of the Wyss Patent states as follows: "in one embodiment as illustrated in FIG. 9, the contact between the posterior cam **50** and the spine **30** begins transitioning to the cam surfaces **58**, **64** **at about 80 degrees**. **At this degree of flexion, initial contact between the convex cam surface 58 of the posterior 50 and the concave cam surface 64 of the spine 30 may be established.**" See Ex. 7 at column 7, lines 31 to 37 (emphasis added).

57. The sixth element of claim 1 of the '280 Patent requires that "at least a portion of the posterior surface of the tibial post of the Accused Product is convex in a transverse (horizontal) plane." See Ex. 1 at column 6, lines 7 to 9. This element is present in the Accused Product as shown in Figures 15 and 16 below:

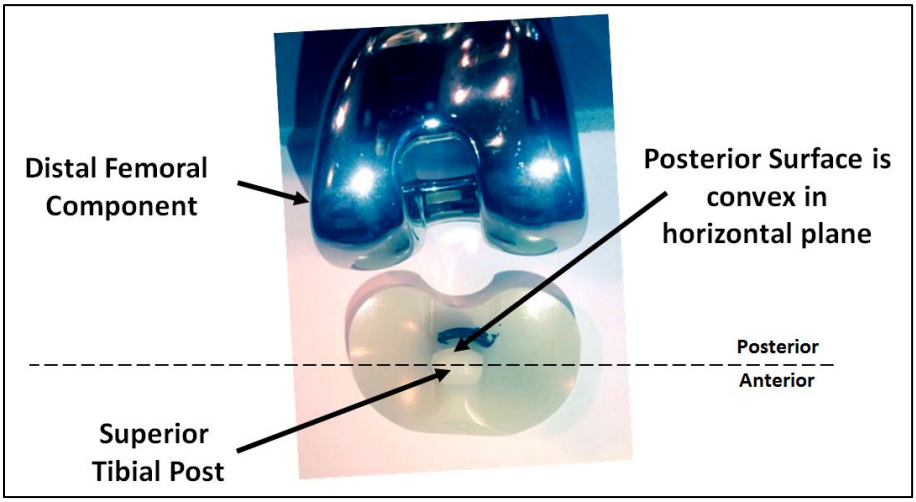


Fig. 15 - Annotated photograph of Accused Product.

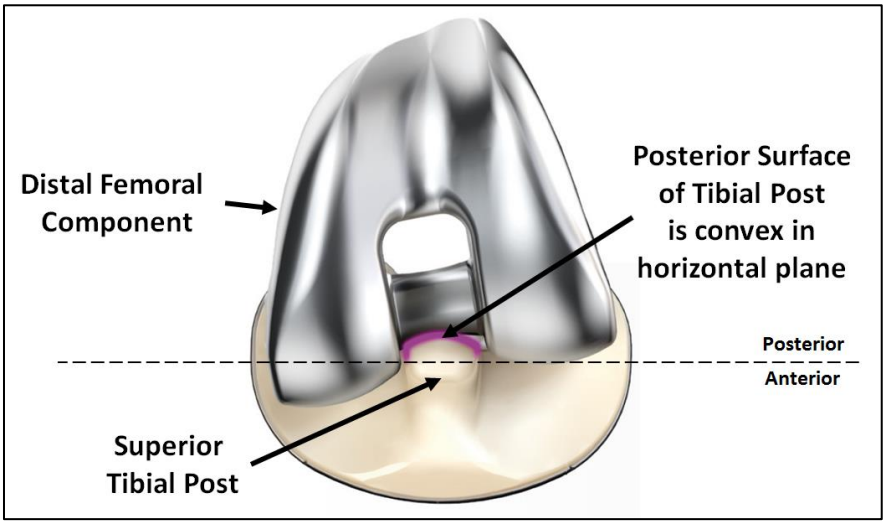


Fig. 16 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

58. The seventh element of claim 1 of the '280 Patent requires that "at least a portion of the cam mechanism of Accused Product's femoral component is concave in

the transverse (horizontal) plane." See Ex. 1 at column 6, lines 10 to 13. This element is present in the Accused Product as shown in Figures 17 and 18 below:

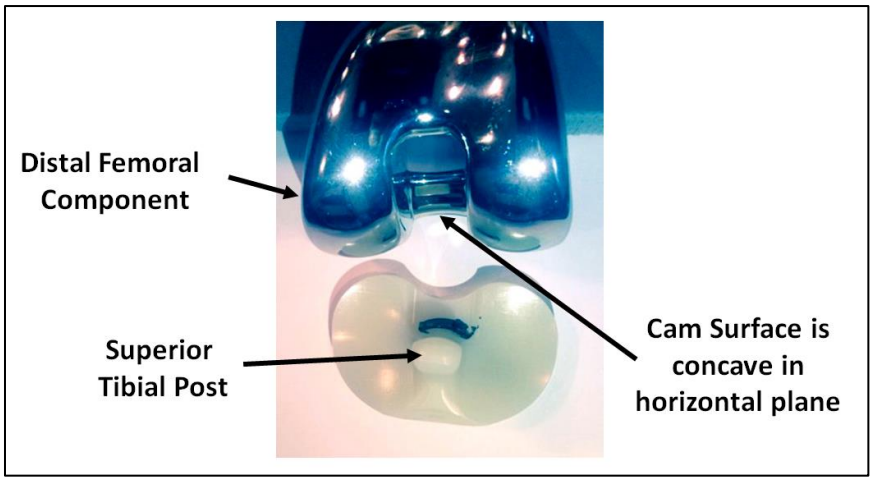


Fig. 17 - Annotated photograph of Accused Product.

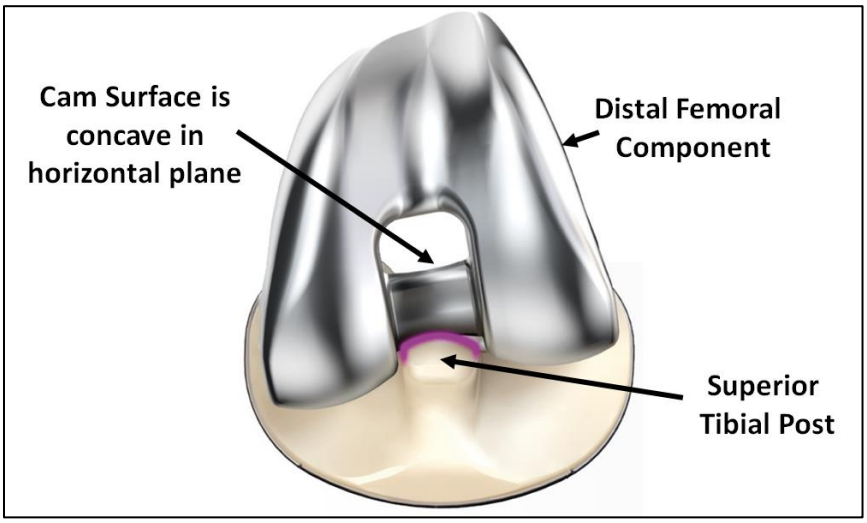


Fig. 18 - Annotated excerpt from Ex. 5 at p. 7 (purple highlight in original).

Dependent Claim 2 of the '280 Patent

59. The first element of claim 2 of the '280 Patent requires that "a portion of the femoral cam mechanism forms an 's' shaped surface portion in the sagittal plane." See Ex. 1 at column 6, lines 13 to 15. The Accused Product has an s-shaped cam as

shown and described in Figures 19 and 20 below. In particular, DePuy highlights "the patented **s-shape of the cam** and spine:"

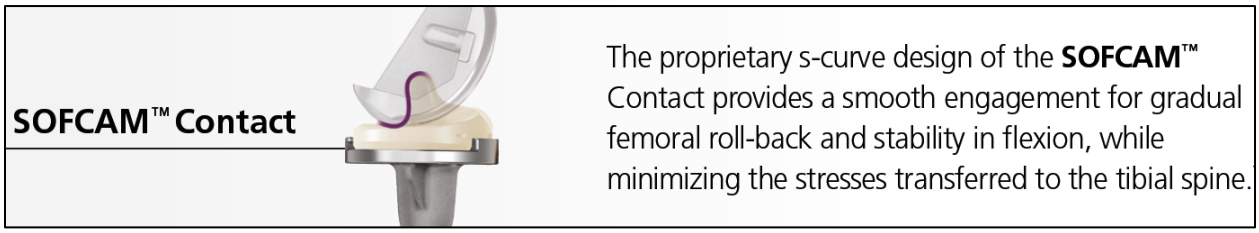


Fig. 19 - Excerpt from Ex. 5 at p. 5 (purple highlight in original).

The patented s-shape of the cam and spine provides a large contact area as the cam initially engages the spine, with the cam/spine transitioning smoothly down the spine as the knee moves further into flexion. The low contact position in high flexion directs the forces through the thickest portion of the tibial insert.[7,8]

Fig. 20 - Excerpt from Ex. 5 at p. 7.

60. The second element of claim 2 of the '280 Patent requires that "the 's' shaped surface portion is formed from the superior aspect of the most superior surface of the femoral cam at its superior convex portion and terminates at the most inferior aspect of the concave surface." See Ex. 1 at column 6, lines 16 to 19. This element is present in the Accused Product as shown in Figure 21 below:

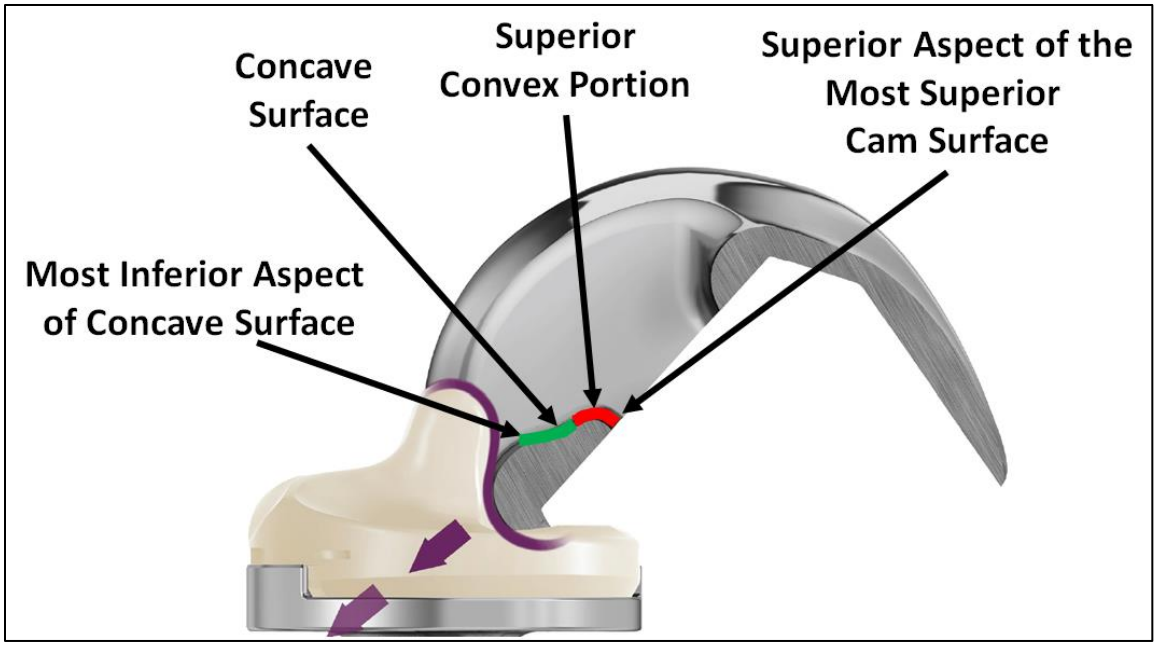


Fig. 21 - Annotated and mirrored (for illustration) excerpt from Ex. 5 at p. 7 (purple highlights in original).

61. As a result of DePuy's unlawful infringement of the '280 Patent, MEDIDEA has suffered and will continue to suffer damage. Under 35 U.S.C. § 284, MEDIDEA is entitled to recover from DePuy the damages suffered by MEDIDEA as a result of DePuy's infringement of the '280 Patent.

62. Upon information and belief, DePuy intends to continue its unlawful infringing activity, and DePuy's infringement on MEDIDEA's exclusive rights under the '280 Patent will continue to damage MEDIDEA causing irreparable harm, for which there is no adequate remedy of law, unless enjoined by this Court under 35 U.S.C. § 283.

COUNT III – INFRINGEMENT OF THE '730 PATENT

63. MEDIDEA realleges and incorporates by reference the allegations set forth in Paragraphs 1 through 62 above as if fully set forth herein.

64. Claim 12 of the '730 Patent requires:

A knee implant for use in posterior cruciate sacrificing procedures, comprising:

a tibial component having a superior post with a posterior surface;

a femoral component having medial and lateral condylar protrusions which form separated bearing surfaces configured to articulate with the tibial component and an intercondylar femoral cam mechanism;

the cam mechanism including an intercondylar bridging structure with a convex outer surface area which engages with the posterior surface of the superior post;

a cam extension with a separate cam action surface area configured to engage with the posterior surface of the superior post to reduce risk of dislocation;

wherein the cam action surface area of the cam extension engages with the superior post only at flexion greater than 90 degrees; and

wherein the separate cam action surface of the cam extension faces proximally away from a tibial articulating surface when a knee is in extension.

See Ex. 2 at column 6, lines 8 to 28.

65. In violation of 35 U.S.C. § 271, DePuy is and has been directly infringing the '730 Patent by, among other activities, making, using, importing, offering for sale, selling, providing, maintaining or supporting, without license or authority, products falling within the scope of one or more claims of the '730 Patent. Such products include, without limitation, certain total knee prostheses, such as, for example, the Attune® PS Knee System and ancillary products (the "Accused Product").

66. Subject to additional information obtained during discovery, the court's constructions of any patent terms about whose meaning the parties disagree, and the detailed initial and final infringement contentions MEDIDEA will make pursuant to this

district's Local Patent Rules (*see, e.g.* LPR 2.2, 3.1), the Accused Product infringes at least independent claim 12 of the '730 Patent as described in the following paragraphs.

67. The Accused Product is an implant for use in posterior cruciate sacrificing (posterior stabilized) procedures as required by the preamble of claim 12 of the '730 Patent.

68. The first element of claim 12 of the '730 Patent requires that the claimed implant comprises "a tibial component having a superior post with a posterior surface." See Ex. 2 at column 6, lines 11-12. This element is present in the Accused Product as shown in Figure 22 below:

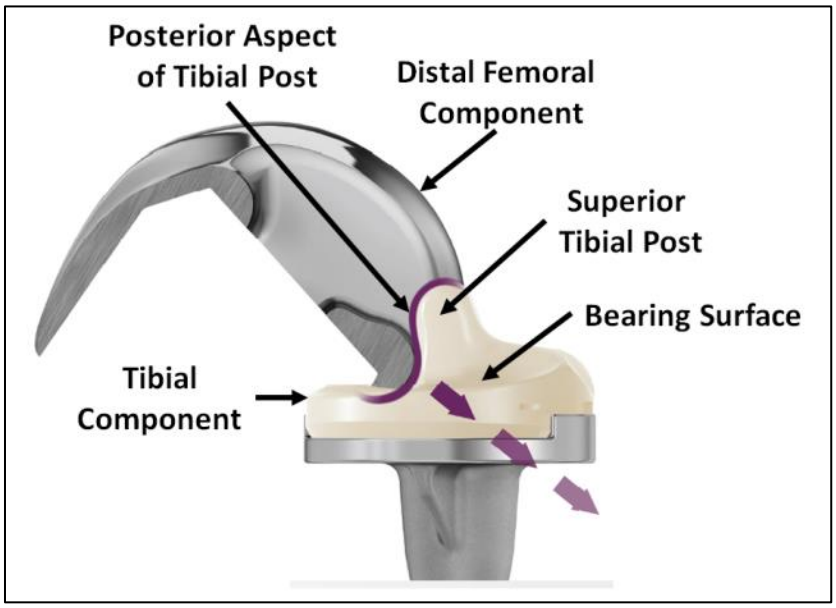


Fig. 22 - Annotated excerpt from Ex. 5 at p. 7 (purple highlights in original).

69. The second element of claim 12 of the '730 Patent requires that the claimed implant comprises "a femoral component having medial and lateral condylar protrusions which form separated bearing surfaces configured to articulate with the tibial component and an intercondylar femoral cam mechanism." See Ex. 2 at column

6, lines 13 to 16. This element is present in the Accused Product as shown in Figures 23 and 24 below:

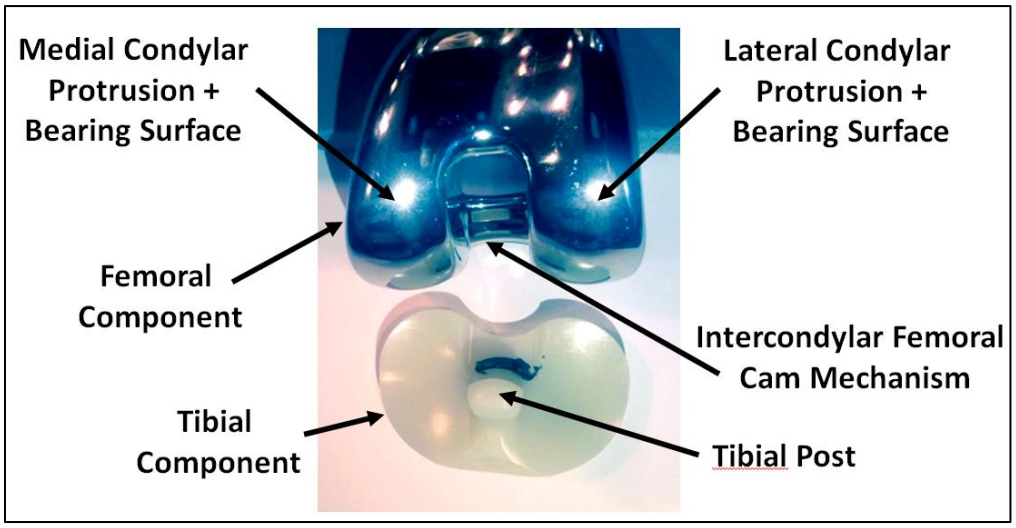


Fig. 23 - Annotated photograph of Accused Product.

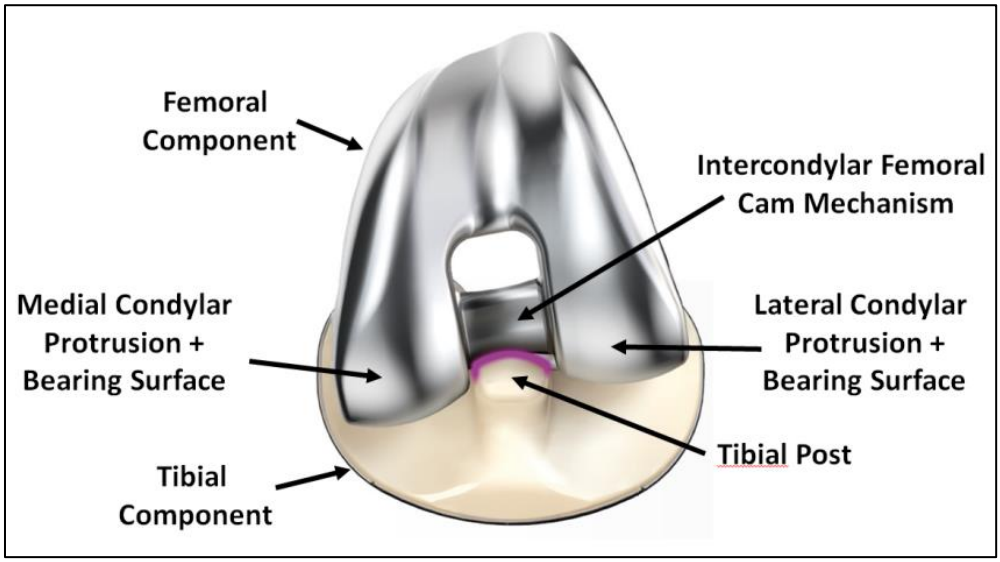


Fig. 24 - Annotated excerpt from Ex. 5 at p. 7 (purple highlights in original).

70. The third element of claim 12 of the '730 Patent requires that "the cam mechanism [includes] an intercondylar bridging structure with a convex outer surface area which engages with the posterior surface of the superior post." See Ex. 2

at column 6, lines 17 to 19. This element is present in the Accused Product as shown in Figure 25 below:

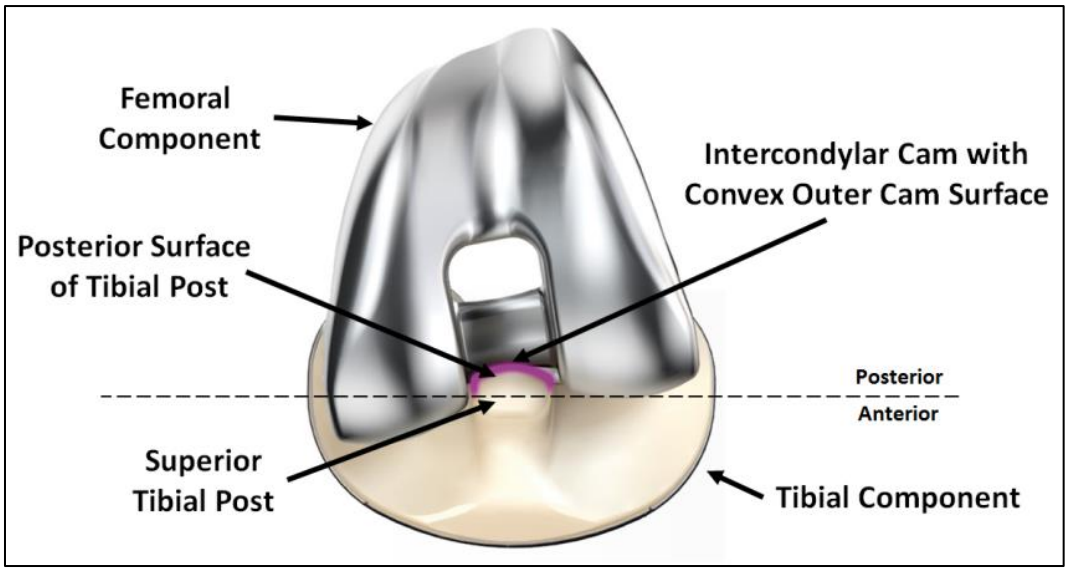


Fig. 25 - Annotated excerpt from see Ex. 5 at p. 7 (purple highlights in original).

71. The fourth element of claim 12 of the '730 Patent requires that the implant includes "a cam extension with a separate cam action surface area configured to engage with the posterior surface of the superior post to reduce risk of dislocation." See Ex. 2 at column 6, lines 20 to 22. As shown in Figures 26 and 27 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

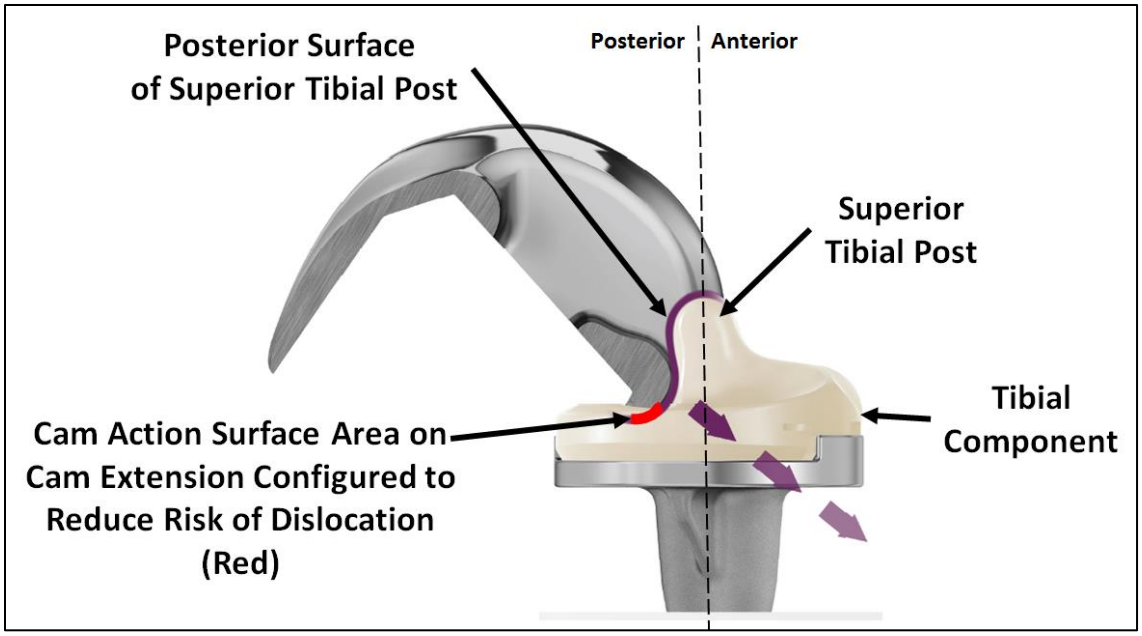


Fig. 26 - Annotated excerpt from see Ex. 5 at p. 7
(Red highlight added, purple highlights in original).

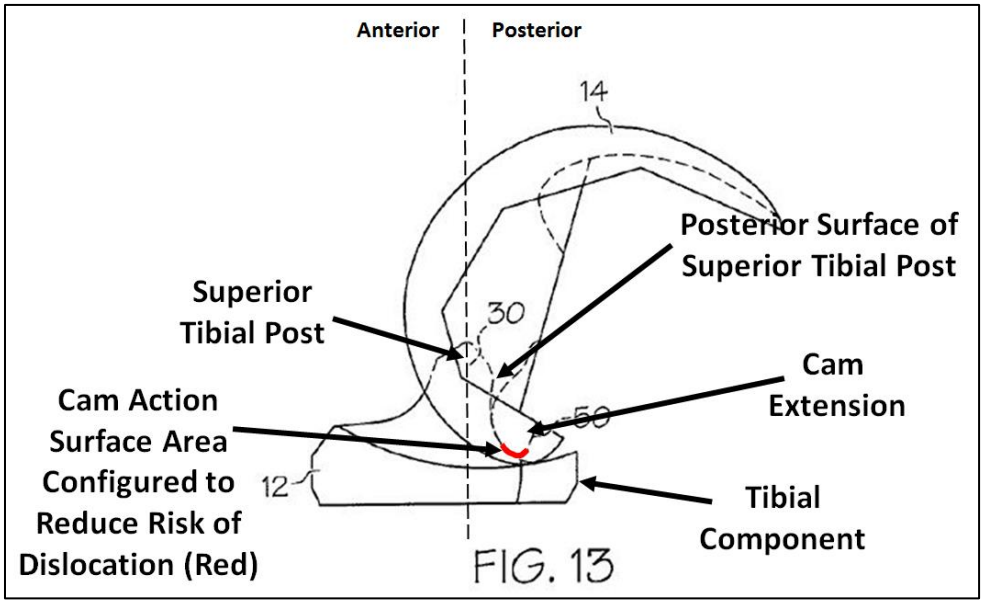


Fig. 27 – Annotated excerpt from Ex. 7 at Fig. 13 (Red highlight added, numerals in original).

72. The fifth element of claim 12 of the '730 Patent requires that "the cam action surface area of the cam extension engages with the superior post only at flexion greater than 90 degrees." See Ex. 2 at column 6, lines 23 to 25. As shown in Figure 28 below, this element is present in the Accused Product and described by the disclosure

of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

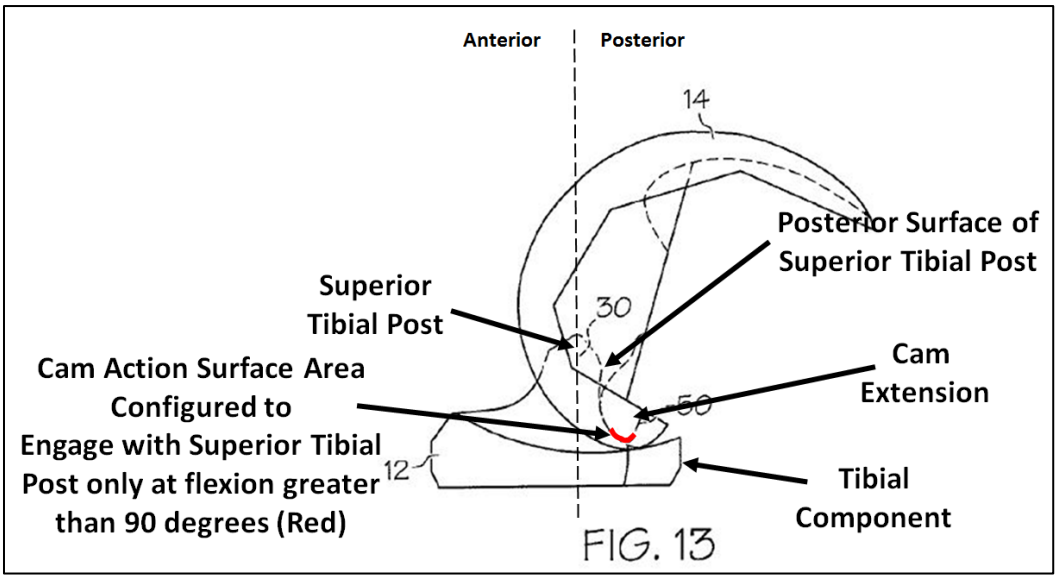


Fig. 28 - Annotated excerpt from Ex. 7 at Fig. 13 (Red highlight added, numerals in original).

73. Further with regard to the fifth element of claim 12 of the '730 Patent, on information and belief, the Accused Product embodies the operation disclosed in Figure 13 of the Wyss Patent (see Fig. 28 above) and with respect to the disclosed operation of the Wyss Patent states as follows: ""[…] the orthopedic prosthesis 10 is illustrated […] at about 130 degrees of flexion in FIG. 13." See Ex. 7 at column 7, lines 42 to 47.

74. The sixth element of claim 12 of the '730 Patent requires that "the separate cam action surface of the cam extension faces proximally away from a tibial articulating surface when a knee is in extension." See Ex. 2 at column 6, lines 26 to 28. As shown in Figure 29 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

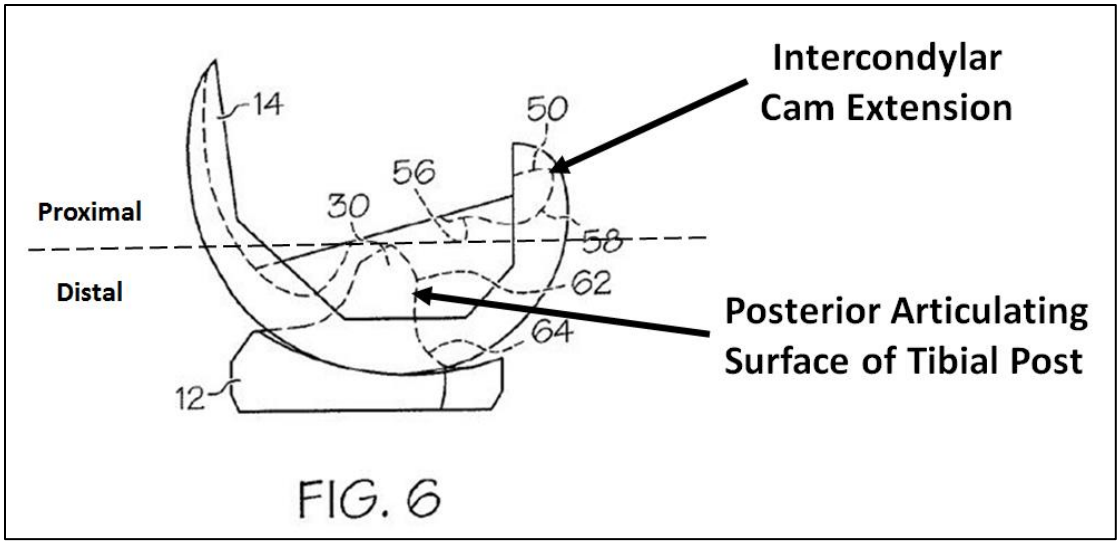


Fig. 29 - Annotated excerpt from Ex. 7 at Fig. 6 (numerals in original).

75. As a result of DePuy's unlawful infringement of the '730 Patent, MEDIDEA has suffered and will continue to suffer damage. Under 35 U.S.C. § 284, MEDIDEA is entitled to recover from DePuy the damages suffered by MEDIDEA as a result of DePuy's infringement of the '730 Patent.

76. Upon information and belief, DePuy intends to continue its unlawful infringing activity, and DePuy's infringement on MEDIDEA's exclusive rights under the '730 Patent will continue to damage MEDIDEA causing irreparable harm, for which there is no adequate remedy of law, unless enjoined by this Court under 35 U.S.C. § 283.

COUNT IV – INFRINGEMENT OF THE '132 PATENT

77. MEDIDEA realleges and incorporates by reference the allegations set forth in Paragraphs 1 through 76 above as if fully set forth herein.

78. Claim 14 of the '132 Patent requires:

A total knee replacement system, comprising:

> *a tibial component having medial and lateral bearing surfaces and a tibial post with a posterior surface;*

> *a distal femoral component having an intercondylar region configured to receive the tibial post and medial and lateral condylar surfaces that articulate with the bearing surfaces of the tibial component over a range of motion from extension through flexion; and;*
>
> *a member on the distal femoral component bridging the intercondylar region, the member including:*
>
> *a convex cam surface that engages with the posterior surface of the tibial post following the onset of flexion, and*
>
> *a cam extension with a cam action surface that initially engages with the posterior surface of the tibial post beyond 90 degrees of flexion to minimize dislocation over the tibial post, and*
>
> *wherein the cam extension projects proximally away from the tibial articulating surface when the knee is in extension.*

See Ex. 3 at column 6, lines 22 to 40.

79. In violation of 35 U.S.C. § 271, DePuy is and has been directly infringing the '132 Patent by, among other activities, making, using, importing, offering for sale, selling, providing, maintaining or supporting, without license or authority, products falling within the scope of one or more claims of the '132 Patent. Such products include, without limitation, certain total knee prostheses, such as, for example, the Attune® PS Knee System and ancillary products (the "Accused Product").

80. Subject to additional information obtained during discovery, the court's constructions of any patent terms about whose meaning the parties disagree, and the detailed initial and final infringement contentions MEDIDEA will make pursuant to this district's Local Patent Rules (*see, e.g.* LPR 2.2, 3.1), the Accused Product infringes at least

independent claim 14 and dependent claims 16 and 17 of the '132 Patent as described in the following paragraphs.

Independent Claim 14 of the '132 Patent

81. The Accused Product is a total knee replacement system as required by the preamble of claim 14 of the '132 Patent.

82. The first element of claim 14 of the '132 Patent requires that the claimed system comprises "a tibial component having medial and lateral bearing surfaces and a tibial post with a posterior surface." See Ex. 3 at column 6, lines 23 to 24. This element is present in the Accused Product as shown in Figures 30 and 31 below:

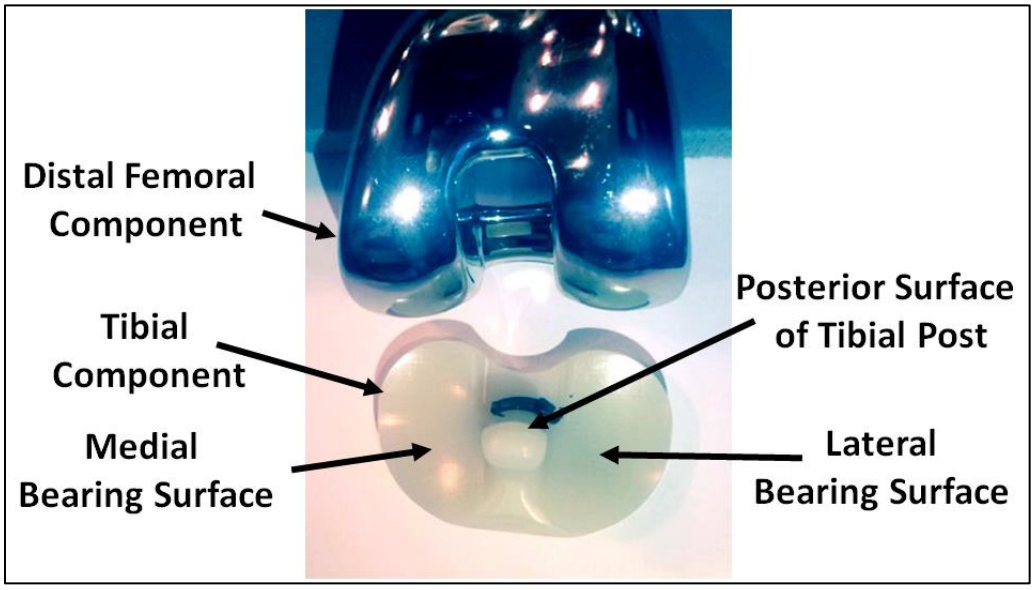


Fig. 30 - Annotated photograph of Accused Product.

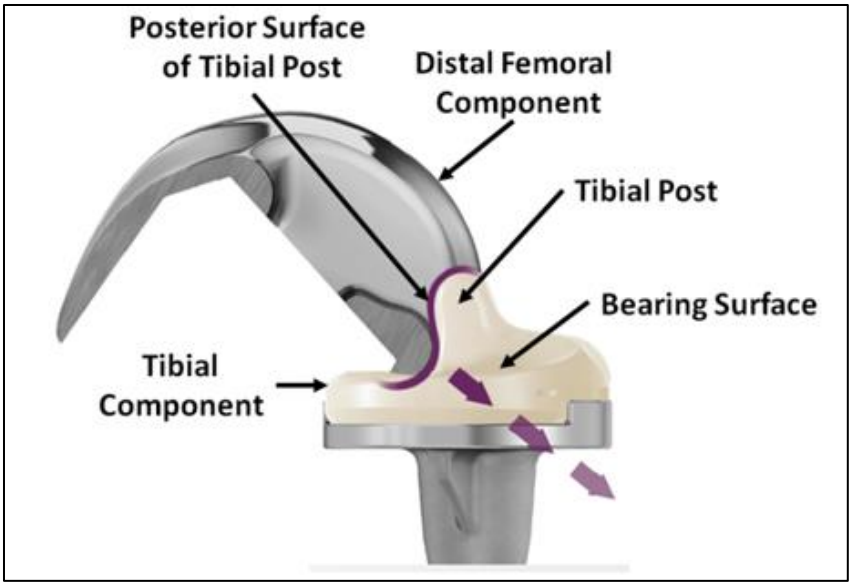


Fig. 31 - Annotated excerpt from Ex. 5 at p. 7 (purple highlights in original).

83. The second element of claim 14 of the '132 Patent requires that the claimed TKR system comprises "a distal femoral component having an intercondylar region configured to receive the tibial post and medial and lateral condylar surfaces that articulate with the bearing surfaces of the tibial component over a range of motion from extension through flexion." See Ex. 3 at column 6, lines 25 to 29. This element is present in the Accused Product as shown in Figures 32 and 33 below:

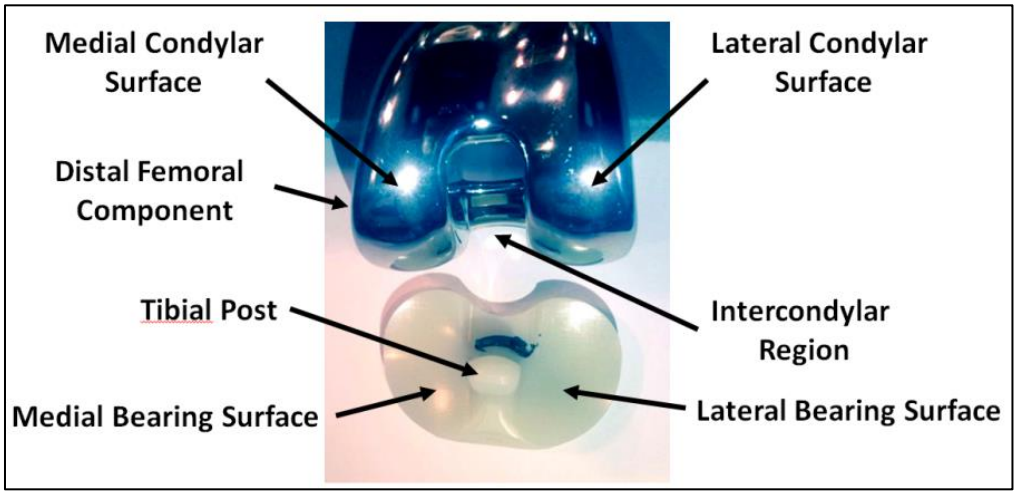


Fig. 32 - Annotated photograph of Accused Product.

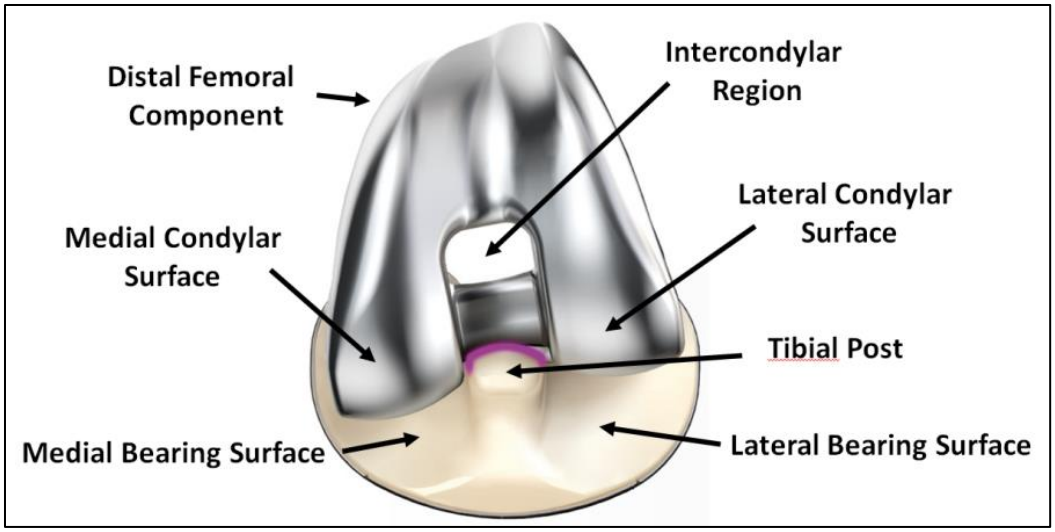


Fig. 33 - Annotated excerpt from Ex. 5 at p. 7 (purple highlights in original).

84. The third element of claim 14 of the '132 Patent requires "a member on the distal femoral component bridging the intercondylar region." See Ex. 3 at column 6, lines 30 to 31. An Intercondylar Cam that bridges the Intercondylar Region is present in the Accused Product as shown in Figure 34 below:

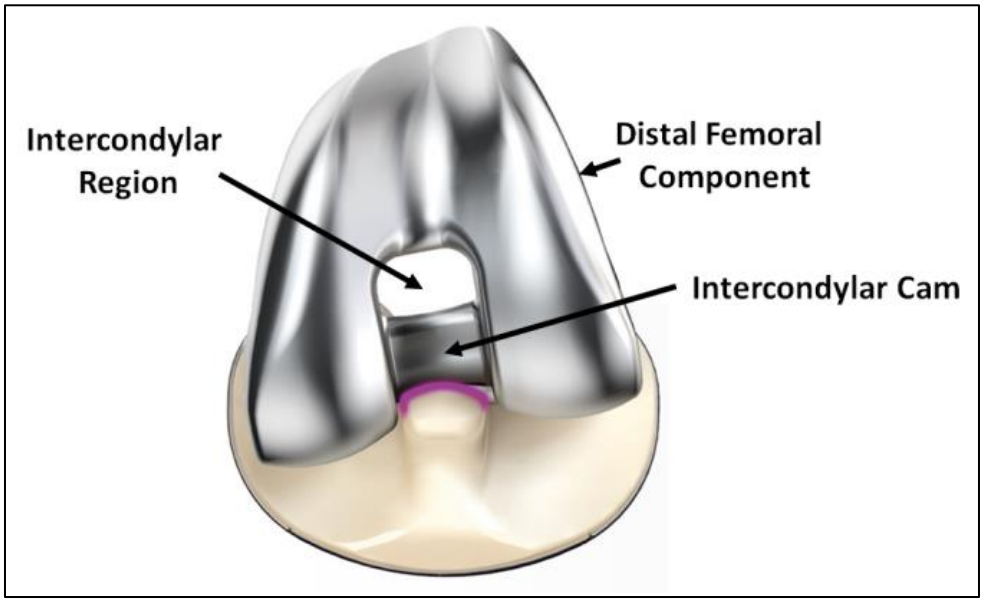


Fig. 34 - Annotated excerpt from see Ex. 5 at p. 7 (purple highlights in original).

85. The fourth element of claim 14 of the '132 Patent requires that "[a member on the distal femoral component bridging the intercondylar region includes] a

convex cam surface that engages with the posterior surface of the tibial post following the onset of flexion." See Ex. 3 at column 6, lines 32 to 33. As shown in Figure 35 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

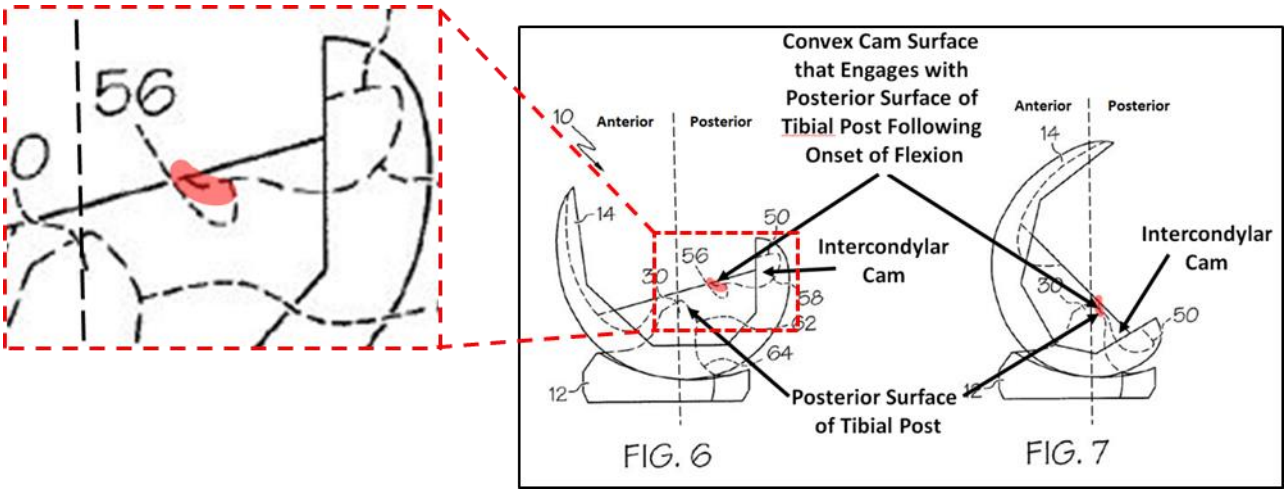


Fig. 35 – Annotated excerpt from Ex. 7 at Figs. 6 and 7 (Red highlight added, numerals in original).

86. Further with regard to the fourth element of claim 14 of the '132 Patent, on information and belief, the Accused Product embodies the operation disclosed in Figures 6 and 7 of the Wyss Patent (see Fig. 35 above) and with respect to the disclosed operation of the Wyss Patent states as follows: "As shown in FIG. 6, when the orthopaedic prosthesis **10** is in extension or is otherwise not in flexion (e.g., a flexion of about 0 degrees), the posterior cam **50** is not in contact with the spine **30**. However, during early flexion as illustrated in FIGS. 7 and 8, the posterior cam **50** of the femoral component **14** contacts the spine **30** of the tibial bearing **12**." See Ex. 7 at column 7, lines 4 to 17.

87. The fifth element of claim 14 of the '132 Patent requires that "[a member on the distal femoral component bridging the intercondylar region includes] a cam extension with a cam action surface that initially engages with the posterior surface of the tibial post beyond 90 degrees of flexion to minimize dislocation over the tibial post." See Ex. 3 at column 6, lines 34 to 37. As shown in Figure 36 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

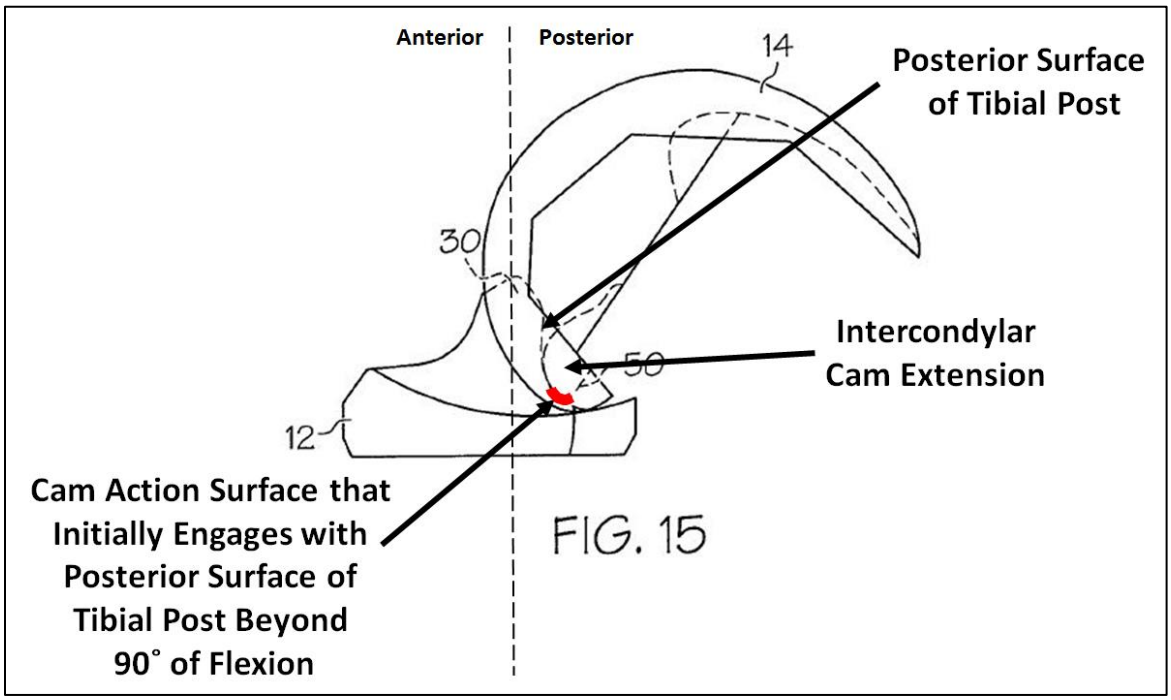


Fig. 36 – Annotated excerpt from Ex. 7 at Fig. 15 (Red highlight added, numerals in original).

88. Further with regard to the fifth element of claim 14 of the '132 Patent, on information and belief, the Accused Product embodies the operation disclosed in Figure 15 of the Wyss Patent (see Fig. 36 above) and with respect to the disclosed operation of the Wyss Patent states as follows: "[…] the orthopedic prosthesis 10 is illustrated […] at about 150 degrees of flexion in FIG. 15." See Ex. 7 at column 7, lines 42 to 47.

89. The sixth element of claim 14 of the '132 Patent requires that "the cam extension projects proximally away from the tibial articulating surface when the knee is in extension." See Ex. 3 at column 6, lines 38 to 39. As shown in Figure 37 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

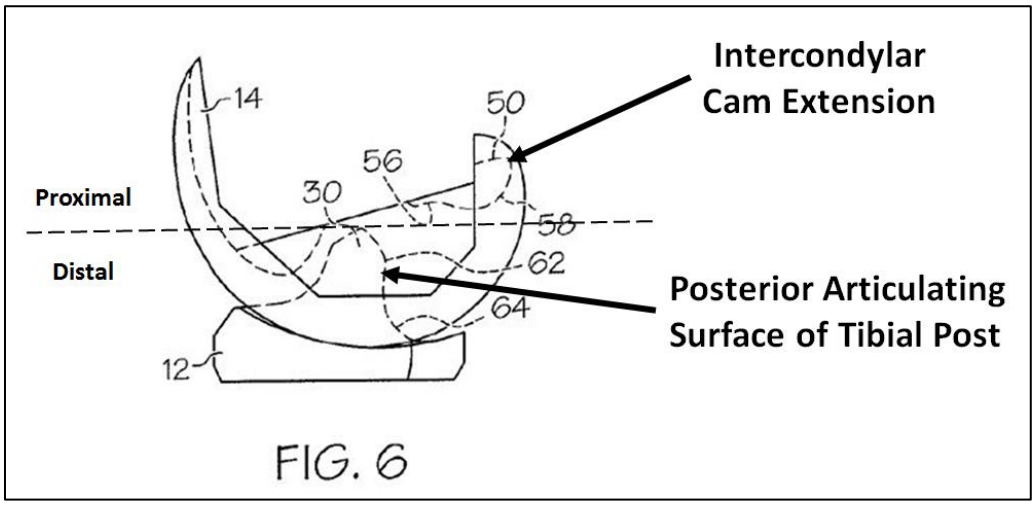


Fig. 37 – Annotated excerpt from Ex. 7 at Fig. 6 (numerals in original).

Dependent Claim 16 of the '132 Patent

90. Claim 16 of the '132 Patent requires that "the cam surface is curved in the transverse plane to allow axial rotation." See Ex. 3 at column 6, lines 47 to 48. This element is present in the Accused Product as shown in Figure 38 below:

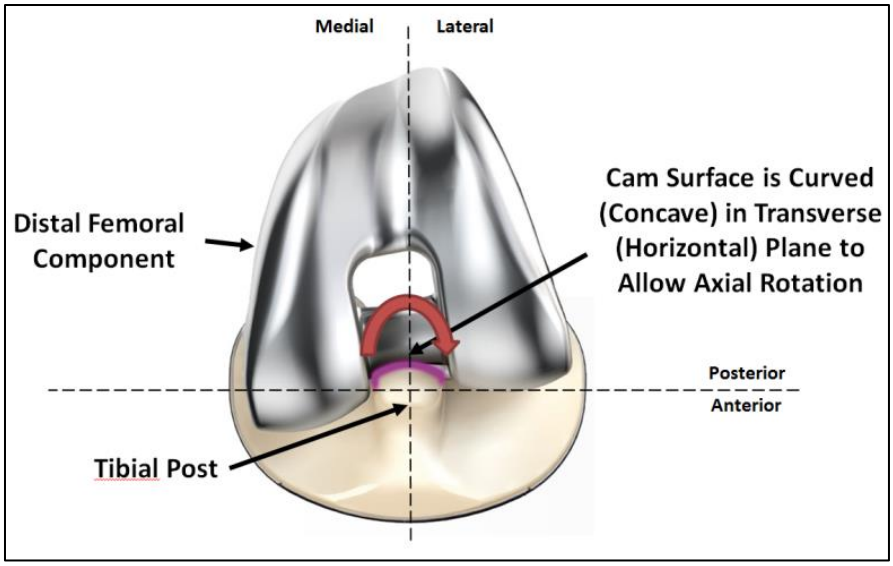


Fig. 38 - Annotated excerpt from see Ex. 5 at p. 7 (purple highlights in original).

Dependent Claim 17 of the '132 Patent

91. Claim 17 of the '132 Patent requires that "the surface of the cam extension is more proximal than the convex surface with the knee in extension." See Ex. 3 at column 6, lines 49 to 51. As shown in Figure 39 below, this element is present in the Accused Product and described by the disclosure of the Wyss Patent which, on information and belief, is embodied by the Accused Product.

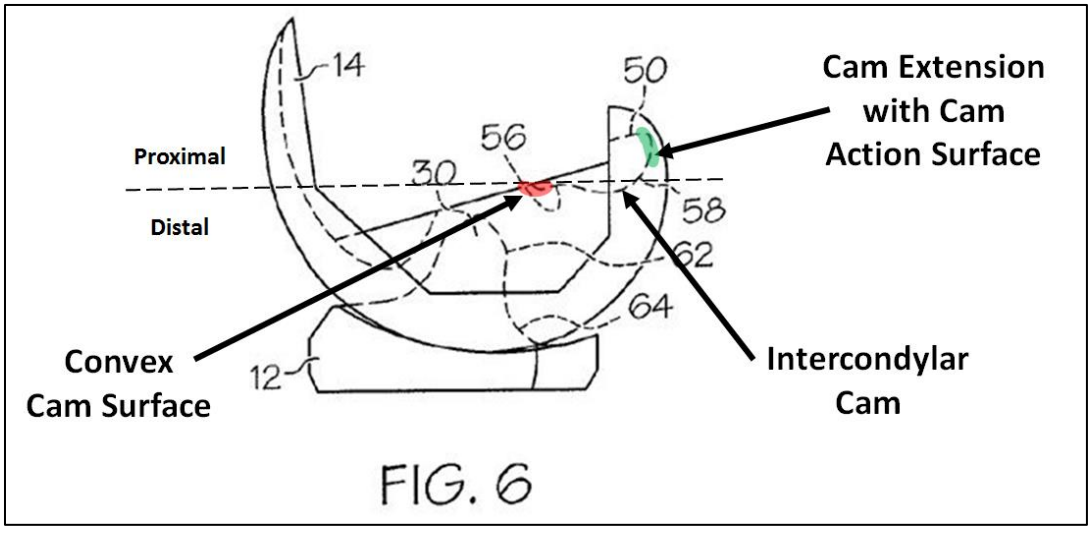


Fig. 39 – Annotated excerpt from Ex. 7 at Fig. 6
(Red and green highlights added, numerals in original).

92. As a result of DePuy's unlawful infringement of the '132 Patent, MEDIDEA has suffered and will continue to suffer damage. Under 35 U.S.C. § 284, MEDIDEA is entitled to recover from DePuy the damages suffered by MEDIDEA as a result of DePuy's infringement of the '132 Patent.

93. Upon information and belief, DePuy intends to continue its unlawful infringing activity, and DePuy's infringement on MEDIDEA's exclusive rights under the '132 Patent will continue to damage MEDIDEA causing irreparable harm, for which there is no adequate remedy of law, unless enjoined by this Court under 35 U.S.C. § 283.

IV. PRAYER FOR RELIEF

WHEREFORE, MEDIDEA respectfully requests that this Court enter judgment against Defendant DEPUY as follows:

(a) for declaration that the Patents-in-Suit are good and valid in law;

(b) for judgment that DePuy has infringed and continues to infringe the Patents-in-Suit;

(c) for a permanent injunction under 35 U.S.C. § 283 against Defendants and its respective directors, officers, employees, agents, subsidiaries, parents, attorneys, and all persons acting in concert, on behalf of, in joint venture, or in partnership with DePuy thereby enjoining any further acts of infringement;

(d) for damages to be paid by DePuy adequate to compensate MEDIDEA for its infringement, together with interest, costs and disbursements, and that

damages be increased three times the amount found as justified under 35 U.S.C. 284;

(e) for judgment finding this to be an exceptional case, and awarding MEDIDEA attorney fees under 35 U.S.C. 285; and

(f) for such further relief at law and in equity as the Court may deem just and proper.

V. DEMAND FOR JURY TRIAL

Pursuant to Federal Rules of Civil Procedure Rule 38, Plaintiff MEDIDEA hereby demands a jury trial on all issues triable by jury.

Dated: April 7, 2017

Respectfully submitted,

Joseph M. Vanek

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