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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TIMOTHY J. HORAN, CHRISTOPHER H. SCHOLL,
and DANEEN K. TOUHALISKY

Appeal 2020-001042
Application 16/031,792
Technology Center 3700

Before ANTON W. FETTING, ULRIKE W. JENKS, and AMEE A. SHAH,
Administrative Patent Judges.

SHAH, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), the Appellant¹ appeals from the Examiner's final decision to reject claims 21–36, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as “DePuy Synthes Products, LLC.” Appeal Br. 2.

CLAIMED SUBJECT MATTER

The Appellant's "invention relates to surgical plates for fixing two separate bone segments and methods for using the plates. More specifically, the plates can be used for tibial plateau leveling osteotomy procedures, particularly for use with canines." Spec. ¶ 1.

Claims 21, 31, and 36 are the independent claims. Claim 21 is illustrative of the subject matter on appeal and is reproduced below (with added bracketing and paragraphing):

21. A bone plate dimensioned for securing two tibial bone segments of an animal as part of a tibial leveling osteotomy procedure, the bone plate comprising:

[(a)] a distal portion comprising an elongated segment configured for attachment to a shaft of a tibia, the distal portion

[(a1)] having disposed therein a plurality of distal portion screw holes each designed to accept a screw therethrough to secure the distal portion to the shaft of the tibia and

[(a2)] defining a base plane including a bone contacting surface of the distal portion and a mid-plane bisecting the distal portion perpendicular to the base plane;

[(b)] a proximal portion configured for attachment to a resected proximal portion of the tibia,

[(b1)] the resected portion comprising an articular surface at which the tibia interacts with a femur;

[(b2)] the proximal portion having an upper surface and a bone-contacting surface opposite the upper surface,

[(b2i)] the bone-contacting surface being pre-contoured to conform to a target portion of a surface of the resected portion of the tibia to which the proximal portion is to be attached,

[(b3)] the proximal portion being partially defined
by

[(b3i)] a concave bone contacting surface,

[(b3ii)] a curvature of at least a portion of the
bone contacting surface extending about a radius of
curvature extending in a rotation axis plane
including a first rotation axis defined by an
intersection of the base plane and a transverse plane
transverse to the midplane and the base plane,

[(b3iii)] the rotation axis plane being rotated
relative to the base plane about the first rotation axis
by a first angle, and

[(biv)] wherein the radius of curvature is
rotated within the rotation axis plane by a second
angle relative to a second rotation axis defined by
an intersection of the mid-plane and the transverse
plane; and

[(c)] a plurality of proximal portion locking screw holes
located in the proximal portion extending through the bone-
contacting surface,

[(c1)] the proximal portion locking screw holes
locking bone screws inserted therethrough along screw
axes selected to pass into the resected portion of bone
without intersecting the articular surface.

Appeal Br. 14–15 (Claims App.).

REJECTIONS

Claims 21–27, 31, and 36 stand rejected under pre-AIA 35 U.S.C.
§ 102(e) as being anticipated by Forstein et al. (US 2006/0173458 A1, pub.
Aug. 3, 2006) (“Forstein”).

Claims 28–30 and 32–35 stand rejected under pre-AIA 35 U.S.C.
§ 103(a) as being obvious over Forstein.

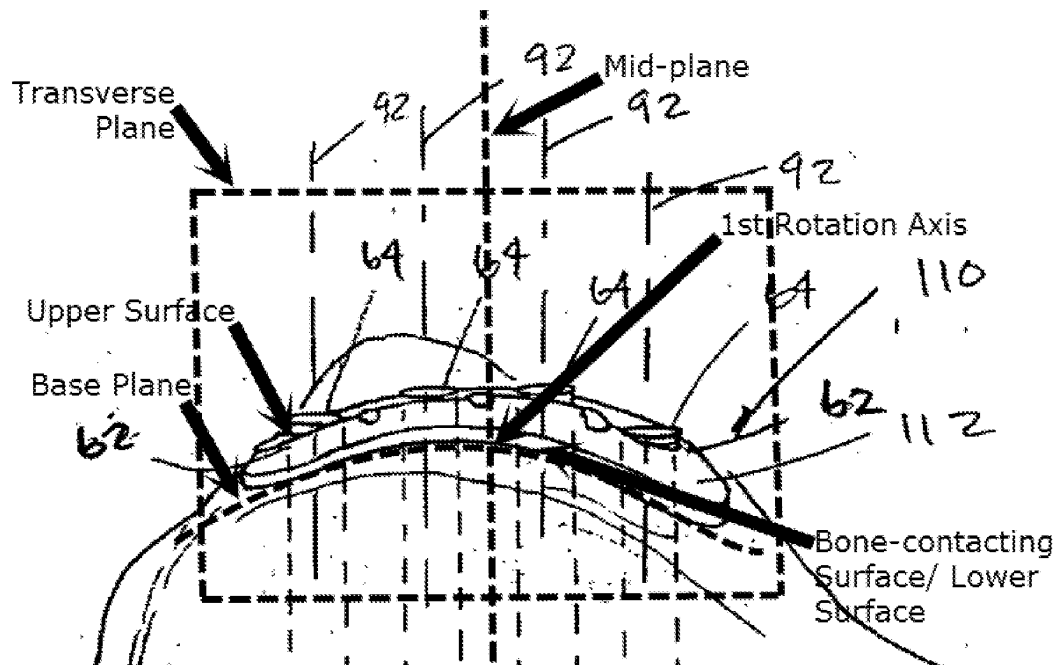
OPINION

Anticipation

After careful review of the record, we agree with the Appellant's contention that the Examiner's rejection of independent claims 21, 31, and 36 is in error because "Forstein does not show or suggest that the contour of the head 112 is curved along a radius of curvature defined with respect to the planes and axes recited in the claims." Appeal Br. 8; *see also id.* at 11, Reply Br. 5, 7.

Independent claim 21 requires, in relevant part, a bone plate with a proximal portion "being pre-contoured to conform to a target portion of a surface of the resected portion of the tibia to which the proximal portion is to be attached" (limitation (b2i) and "being partially defined by a concave bone contacting surface" (limitation (b3i), and "a curvature of at least a portion of the bone contacting surface extending about a radius of curvature extending in a rotation axis plane including a first rotation axis defined by an intersection of the base plane and a transverse plane transverse to the midplane and the base plane" (limitation (b3ii)). Appeal Br. 14–15 (Claims App.). Each of independent claims 31 and 36 contains similar features. *See id.* at 17, 19. The Examiner finds that Forstein discloses these features in, at least, Figures 9–11. *See* Final Act. 4–5, 13–15; Ans. 4–7. Specifically, the Examiner finds "the Appellant is referencing their invention based upon imaginary axes and planes of their plate to achieve a curved shape in the arc of a cylinder to which the bone plate is to cover." Ans. 4. The Examiner acknowledges that "the written description of Forstein does not expressly teach these axes and plane [sic] in the prior art drawings or specification," but finds that "the same arced cylindrical curvature and the claimed axes as

Appellant's can be found and were provided in the Final Office Action (reproduced below) to expressly show how the prior art achieve the same curvature as their invention." *Id.*



Forstein's Figure 10 as annotated by the Examiner shows the arced curvature, axes, and planes considered by the Examiner to meet the claimed limitations.

We find persuasive the Appellant's argument's that "the claimed planes and axes are in no way *imaginary*, as suggested by the Examiner, but rather, the planes and axes are explicitly defined in the claims, with respect to structural features of the bone plate." Appeal Br. 9; Reply Br. 6. As the Appellant points, out "claim 21 recites a distal portion 'defining a base plane including a bone contacting surface of the distal portion and a mid-plane bisecting the distal portion perpendicular to the base plane'," as recited limitation (a2). Appeal Br. 9. Further, the Specification defines each of the

additional planes and axes relative to the base axis (*see id.*; Spec. ¶ 41) and depicts the axes in Figures 2B, 2C, and 2D (reproduced below).

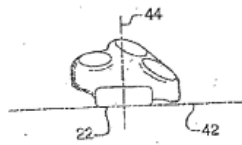


FIG. 2B

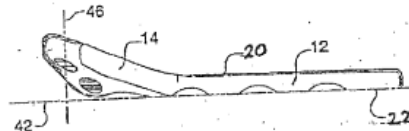


FIG. 2C

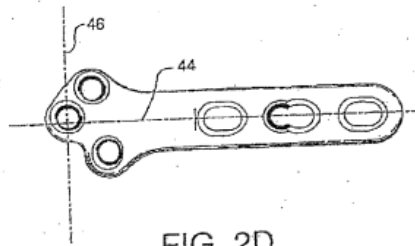


FIG. 2D

Figures 2B, 2C, and 2D depicting end, side, and top views, respectively, of the claimed bone plate.

In Fig. 2B, the plate 10 is viewed from the end of the distal portion 12 longitudinally along its shaft. A base plane 42 is defined by the flat distal portion 12 at the bone-contacting surface 22. A mid-plane 44 is defined as bisecting the base plane in the distal portion 12 of the plate 10 and extending along the length of the plate. A transverse plane 46 is defined as being orthogonal to the base plane 42 and the mid-plane 44.

Spec. ¶ 41. These figures clearly show the base plane as flat, i.e., straight, at the distal portion and not curved, and the relationships of the base, mid, and transverse planes as perpendicular to each other. Thus, we agree with the Appellant that the Examiner's interpretation of Forstein's base plane as curved does not meet the claimed base plane and its relationships to the mid and transverse planes, i.e., bisected by and perpendicular/orthogonal to.

For the above reason, we do not sustain the Examiner's rejection under 35 U.S.C. § 102(e) of independent claims 21, 31, and 36, and of dependent claims 22–27, which rely on the same inadequate finding.

Obviousness

The Examiner's rejection of claims 28–30 and 32–35 does not cure the deficiencies set forth above with respect to independent claims 21 and 31. Therefore, we do not sustain the rejection of claims 28–30 and 32–35 under 35 U.S.C. § 103(a).

CONCLUSION

The Examiner's decision to reject claims 21–27, 31, and 36 under 35 U.S.C. § 102(e) is not sustained.

The Examiner's decision to reject claims 28–30 and 32–35 under 35 U.S.C. § 103(a) is not sustained.

In summary:

Claim(s) Rejected	35 U.S.C. §	References	Affirmed	Reversed
21–27, 31, 36	102(e)	Forstein		21–27, 31, 36
28–30, 32–35	103(a)	Forstein		28–30, 32–35
Overall Outcome				21–36

REVERSED