



UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ANDRE FRENK, FLORIAN BEUTTER, and FRANCO CICOIRA

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Appeal 2009-005654  
Application 10/861,818  
Technology Center 3700

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Decided:<sup>1</sup> June 19, 2009

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Before DONALD E. ADAMS, ERIC GRIMES, and LORA M. GREEN,  
*Administrative Patent Judges.*

GREEN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-9. We have jurisdiction under 35 U.S.C. § 6(b).

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

### STATEMENT OF THE CASE

Claim 1 is the only independent claim on appeal, and reads as follows:

1. A bone screw for connecting a plurality of bone fragments comprising:  
first and second ends and a longitudinal axis, the first end having a first threaded portion with a first core diameter, a first external diameter and a first pitch, the second end having a second threaded portion with a second core diameter, a second external diameter and a second pitch, the second end further having a tool engaging surface; wherein the first external diameter is smaller than or equal to the second core diameter, and the first and second pitches are substantially equal.

The Examiner relies on the following evidence:

Kim	US 5,779,704	Jul. 14, 1998
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We reverse.

### ISSUE

The Examiner finds that claims 1-9 are anticipated by Kim.

Appellants contend that the pitches of the two threaded portions in Figure 2 of Kim cannot be characterized as “substantially equal” because the drawings are not described by the disclosure of Kim as being to scale.

Thus, the issue on appeal is: Have Appellants demonstrated that the Examiner erred in finding that the pitches of the two threaded portions in Figure 2 of Kim are “substantially equal” as required by independent claim 1?

FINDINGS OF FACT

FF1 The Specification teaches a bone screw, wherein “the pitch of the external thread at the front threaded segment and at the rear threaded segment [are] the same.” (Spec. 2.)

FF2 The Examiner rejects claims 1-9 under 35 U.S.C. § 102(b) as being anticipated by Kim (Ans. 3).

FF3 The Examiner finds that Kim teaches a bone screw that is encompassed by the language of claim 1 (*id.* at 3-4).

FF4 Relying on Figure 2, the Examiner finds that Kim discloses a bone screw having a first end with a first threaded portion (threaded portion near ref. 40), and a second end having a second threaded portion (threaded portion near ref. 42), wherein, as can be seen in Figure 2 of Kim, the pitches of the first and second threaded portions are substantially equal (*id.* at 3).

FF5 The Examiner notes that “the term ‘substantially’ is a broad term,” thus “the prior art need not disclose threads that are precisely equal.” (Ans. 5.)

FF6 Figure 2 of Kim is reproduced below:

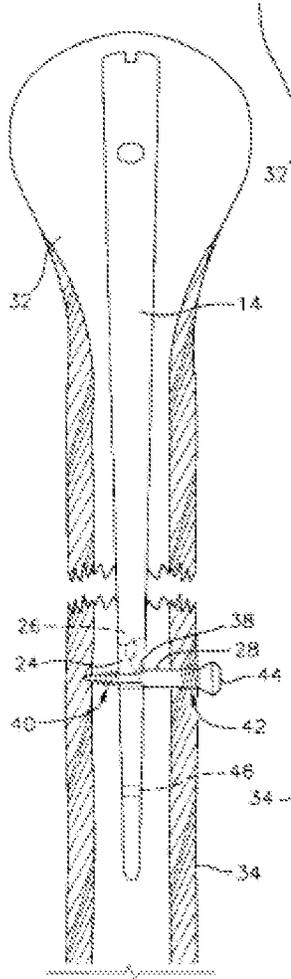


FIG. 2

Figure 2 shows an embodiment of the rod fixation system of Kim (Kim, col. 3, ll. 18-20).

FF7 The Examiner does not rely on any other disclosure in Kim as to the pitch of the two threaded areas.

FF8 “Substantially<sup>2</sup>” may be defined as “[i]n a substantial manner; in substance; essentially.”

#### PRINCIPLES OF LAW

We recognize that during prosecution before the Office, claims are to be given their broadest reasonable interpretation consistent with the Specification as it would be interpreted by one of ordinary skill in the art. *In re American Academy Of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Claim language, however, “should not [be] treated as meaningless.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006).

To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001).

“[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” *Hockerson-Halbertstadt, Inc. v. Avia Group Int’l Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) (holding that the drawings could not be relied upon to construe whether the term “central longitudinal groove” required that the width of the groove be less than the combined width of the fins). “Ordinarily drawings

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<sup>2</sup> substantially. Dictionary.com. *Webster's Revised Unabridged Dictionary*. MICRA, Inc. <http://dictionary.classic.reference.com/browse/substantially> (accessed: June 08, 2009).

which accompany an application for a patent are merely illustrative of the principles embodied in the alleged invention claimed therein and do not define the precise proportions of elements relied upon to endow the claims with patentability.” *In re Olson*, 212 F.2d 590, 592 (CCPA 1954).

### ANALYSIS

Appellants argue that the “threads 40 and 42 in Figure 2 of Kim cannot be characterized as ‘substantially equal’ because the drawings are not described [by the disclosure of Kim] as being to scale.” (App. Br. 3.) Appellants contend that the Examiner is improperly interpreting “substantially” as not requiring a precise proportion (*id.* at 3-4). According to Appellants, the Specification “calls for the pitches to be ‘identical’ and ‘the same,’” thus the “qualifier ‘substantially’ read in this light thus means that to infringe the claim an accused bone screw need not be held to an impossibly high standard of metaphysical identity that does not allow for discrepancies due to typical manufacturing tolerances.” (*Id.* at 4.)

Claim 1 requires that the screw have threaded portions on its first and second ends, wherein the pitch of the first and second portions are “substantially equal.” As noted by Appellants, the Specification teaches that the pitches are “the same.” The Examiner interprets “substantially” very broadly, without setting a limit on what would be considered substantially equal, and what would not. Given the teachings of the Specification, as well as the dictionary definition of “substantially” as “essentially,” we agree with Appellants’ interpretation of “substantially the same” as being within manufacturing tolerances.

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Therefore, as the Examiner relies solely on the drawings of Kim to support the finding that the pitch of the first and second threaded portions are “substantially equal,” and as drawings do not define the precise proportions of the elements and may not be relied upon to show particular sizes if the specification is completely silent on the issue, we agree with Appellants that the Examiner has not established that Kim teaches a screw wherein the pitches of the first and second threaded portions are “substantially equal.”

#### CONCLUSION(S) OF LAW

We find that Appellants have demonstrated that the Examiner erred in finding that the pitches of the two threaded portions in Figure 2 of Kim are “substantially equal” as required by independent claim 1.

We thus reverse the rejection of claims 1-9 under 35 U.S.C. § 102(b) as being anticipated by Kim.

REVERSED

cdc

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