

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte
STEPHEN D. KUSLICH, JAMES D. CORIN, and GEORGE W. BAGBY

Appeal No. 1998-2808
Application No. 08/733,464

HEARD: February 23, 2000

Before McQUADE, NASE, and GONZALES, Administrative Patent Judges.

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the examiner's refusal to allow claims 3, 7 through 10 and 12 through 17. Claims 3, 12, 13

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and 17 were canceled subsequent to the final rejection.¹ At oral hearing, the appellants withdrew the appeal with respect to claim 14. Accordingly, the appeal with respect to claim 14 is dismissed. Claims 7 through 10, 15 and 16 remain on appeal.

We REVERSE.

The subject matter on appeal is directed to a threaded spinal implant used to rigidly join vertebrae. An understanding of the invention can be derived from a reading of exemplary claim 7 which appears in "Appendix A" of appellants' brief.

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Feinberg	3,298,372	Jan. 17,
1967		

Claims 7 through 10, 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Feinberg.²

¹ See Paper No. 17.

² Claim 10 was also rejected in the final rejection under 35 U.S.C. § 112, second paragraph, as being indefinite. However, subsequent to the final rejection, claim 10 was amended (Paper No. 17) to overcome the § 112 rejection. See Paper No. 18.

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The full text of the examiner's rejection and the responses to the arguments presented by appellants appear in the final rejection (Paper No. 15) and the answer (Paper No. 22) while the complete statement of appellants' arguments can be found in the main and reply briefs (Paper Nos. 20 and 26, respectively).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and the claims, to the applied prior art reference, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we conclude that the

§ 103 rejection cannot be sustained.

Claim 7, the only independent claim before us for review, calls for an implant comprising, inter alia, a rigid body having a longitudinal axis and a generally continuous helical thread pattern disposed substantially entirely throughout an

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axial length of the body, a plurality of the threads having a cross-sectional profile taken along a plane parallel to the longitudinal axis of the body, having substantially radial leading and trailing faces each connected by an annular surface with the leading and trailing faces and the annular surface defining the profile and having a distance between the leading and trailing faces at a radially outer end of the faces that is substantially equal to a distance between the leading and trailing faces at a radially inner end of the faces.

At page 10 of appellants' specification, it is explained that the thread profile set forth in claim 7 and illustrated in appellants' Figure 7 has a greater cross-sectional area and is more effective in holding the implant in place than the sharp threads shown in appellants' Figure 7A.

Feinberg discloses a shunt for treating hydrocephalus which is surgically implanted into the bone marrow of a vertebra (col. 2, lines 44-52 and Figure 3). The shunt comprises a thin-walled cylindrical shell 20 open at both ends and having an axial passage 22 and a radial flange 24 with

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slots 25, 26 formed integrally with one end of the shell. The shell 20 is provided with a plurality of elongated apertures 29 disposed about the circumference of the shell. In order to secure the implant within the body of a vertebra, the shell 20 is provided with screw threads extending from the flange to the apertures 29 (col. 3, lines 72-74).

The examiner acknowledges that Feinberg does not teach the thread profile recited in claim 7, but argues that the specific thread profile claimed is well known in the art of bone screws and "would have been directly obvious from the discussion pertaining to infants in column 4, lines 2-7, and from the inherent geometry of raised knurls (Figure 5), in order to accommodate the 'cartilage-bone' in infants as well as other situations in humans generally" (final rejection, pages 3 and 4).

The appellants argue (main brief, page 10) that the examiner has failed to explain why the invention set forth in claim 7 would have been obvious from column 4, lines 2-7 of Feinberg. In addition, the appellants challenge the examiner's statement regarding what is well known in the bone

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screw art (id.).

To support his position that the screw thread profile set forth in claim 7 is well known in the art of bone screws, the examiner, on page 5 of the answer, relies on U.S. Patent No. 4,569,338 to Edwards. Edwards, however, is not included in the statement of the rejection and was used for the first time in the answer to support the examiner's position. Such a procedure by the examiner is totally improper and inappropriate since Edwards does not form a part of the examiner's final rejection of the appealed claims. If a reference is relied upon in any capacity to support a rejection, the reference should be positively included in the statement of the rejection. See Manual of Patent Examining Procedure (MPEP) § 706.02(j) (7th ed., Jul. 1998), In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). See also Ex parte Raske, 28 USPQ2d 1304, 1305 (Bd. Pat. App. & Int. 1993). Accordingly, we have not considered the Edwards patent or the examiner's comments with respect thereto in reaching our decision on this appeal.³

³We note that while Edwards does mention that the threads have a "wide surface of contact" (col. 4, line 54), the "wide surface" appears to be a

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At column 4, lines 2-7, Feinberg teaches that

[i]n some situations, however, particularly with small infants whose vertebrae have bone marrow surrounded by cartilage-bone in a 50%-50% ratio, or 70%-30% ratio, it may be desirable to extend the threads 33 down between the apertures 29 or to utilize a maze of protruding knurls in lieu of the threads 33.

Like the appellants, we fail to understand how the above quoted passage from Feinberg would have rendered the specific thread profile recited in claim 7 obvious.⁴ Feinberg does teach an embodiment particularly suited for infants, in which the threads 33 are replaced by raised knurls 41 (Figure 5 and col. 4, lines 58-71), but we find no suggestion therein of the claimed thread profile and the examiner has not explained how Feinberg's discussion pertaining to infants and use of knurling would have suggested the thread profile of claim 7.

reference to the diameter of the threads taken along a plane perpendicular to the longitudinal axis of the screw, not to the profile of the threads taken along a plane parallel to the longitudinal axis of the screw. Thus, Edwards does not appear to support the examiner's assertion that the claimed profile is well known in the bone screw art.

⁴ In evaluating Feinberg, we have taken into account not only the specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

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A conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., Grain Processing Corp. v. American Maize-Products Co., 840

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F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). In the present case, the examiner has not provided a sufficient factual basis for concluding that the modification to the screw threads of Feinberg necessary to meet the limitations of claim 7 would have been obvious. From our perspective, the examiner has instead impermissibly relied upon the appellants' own teachings in arriving at a conclusion of obviousness. This being the case, we will not sustain the rejection of claim 7 under 35 U.S.C. § 103 based on Feinberg.

Claims 8 through 10, 15 and 16 are dependent on claim 7 and, therefore, contain all of the limitations of that claim. Therefore, we will also not sustain the standing 35 U.S.C. § 103 rejection of claims 8 through 10, 15 and 16.

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