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BOARD OF PATENT APPEALS
AND INTERFERENCES
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN O. HAYHURST

Appeal No. 94-2891
Application 715,113¹

ON BRIEF

Before PENDEGRASS, STONER, and STAAB, Administrative Patent Judges.

STONER, Administrative Patent Judge.

DECISION ON APPEAL

John O. Hayhurst ("appellant") appeals² from the final rejection of claims 5, 6, 12, 13, and 15 through 20 under 35 USC 103.³ These are all of the claims pending in this application. We affirm-in-part.

¹ Application for patent filed June 12, 1991. According to appellant, the application is a division of Application 07/192,813, filed April 20, 1988, which is a continuation-in-part of Application 06/848,341, filed April 4, 1986, now U.S. Patent No. 4,741,330, which is a continuation of Application 07/496,116, filed May 19, 1983, now abandoned, which is a continuation-in-part of Application 07/380,043, filed May 20, 1982, now abandoned.

² Notice of appeal filed October 12, 1993.

³ Final Office action mailed June 9, 1993.

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As aptly stated at page 3 of the brief⁴, the claimed invention is directed to a method for anchoring in bone a member that has a suture attached to it. Independent claims 5, 17 and 19 define the invention as follows:

5. A method for anchoring in bone a member and attached suture, comprising the steps of:

forming a hole in the bone;

attaching a suture to a member; and

lodging the member within the hole by pressing the member with attached suture into the hole.

17. A method of anchoring in bone a member and attached suture, comprising the steps of:

providing a deformable member having a width dimension "D";

attaching a suture to the member;

forming a hole in a bone in a manner such that the hole has a diameter that is not greater than the width dimension "D"; and

inserting the member into the hole with the member oriented such that the member lodges within the hole in the absence of any manipulation of the member other than inserting the member into the hole.

19. A method for anchoring a member in a bone, comprising the steps of:

threading a suture through the member;

forming a hole in the bone; and

pressing the member into the hole so that two contiguous segments of the suture extend from the hole.

⁴ Filed December 13, 1993.

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The references relied upon by the examiner⁵ are:

Bivins	4,275,490	June 30, 1981
Freedland	4,409,974	Oct. 18, 1983 ⁶

Claims 5, 6, 12, 13 and 15 through 20 stand rejected under 35 USC 103 as unpatentable over Freedland in view of Bivins. As stated in the final Office action, it is the examiner's position that:

Free[d]land discloses in figure 14 a method for anchoring in bone a member and attached suture, substantially as claimed. However, Free[d]land does not disclose lodging the member within the hole. Bivins discloses in figure 1 a method for securing calvarium skull section to basal skull section comprising using a member 22 that is lodged into the bone in order to hold a rubber filament within the brain. It would have been obvious to one having ordinary skill in the art at the time of the invention that the member as disclosed by Free[d]land could be constructed as a wedged shaped plug as disclosed by Bivins in order to lodge the member into the bone to provide a friction fit between the bone and the member.⁷

⁵ For reasons which are not clear to us, the examiner has not seen fit to respond to the appellant's twice-presented prior art statement, first filed November 4, 1991, and again filed March 19, 1993. It appears to us that the examiner has an obligation to indicate the disposition of these papers.

⁶ Based on the record, we understand this to be the reference mistakenly identified as "Freeland" and "4,09,974" in the answer.

⁷ We note that, apart from the brief discussion in the answer, this is the totality of what the examiner has had to say about these references throughout the prosecution of this application. There has been no attempt made by the examiner to relate the teachings of the references to the specifics of what

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The respective positions of the appellant and the examiner with regard to the patentability of these claims over this art are expressed at pages 6 through 18 of the brief⁸, pages 1 and 2 of the reply brief⁹ and on the third and fourth pages of the answer.¹⁰

For reasons which follow, we shall affirm the examiner's § 103 rejection of claims 5, 6, 12, 15, 19 and 20, albeit for reasons somewhat different than those stated by the examiner, as a result of which we designate our affirmance a new ground of rejection pursuant to 37 CFR 1.196(b). We reverse the examiner's rejection of claims 13, 16, 17 and 18.

We find that Freedland discloses a surgical implant device particularly useful for rigidly fixing bone portions (column 1, lines 6-9, and column 2, lines 65-68). The device includes a head 12 to which arms 20 are hinged at 22, the arms being deployable from a folded condition (shown in figures 1-5, 10 and 11) to an unfolded or expanded condition (shown in figures 6-9 and 12-16). The deployment of the arms from folded to

the appellant has claimed.

⁸ Filed December 13, 1993.

⁹ Filed July 21, 1994.

¹⁰ According to the file wrapper, the answer was mailed May 20, 1994. The answer has neither page numbering nor a date stamp indicative of mailing, both of which contribute to a less than clear record.

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unfolded condition is brought about by manipulation of the individual threads 46 of a thread bundle 36, each thread 46 having one end connected to a respective arm 20 and passing through an aperture in the head 12 to a location external of the bore in which the implant device is to be installed. The device may be passed entirely through a bore drilled through a bone or in aligned bone segments to serve as an anchor located in abutment with the exterior of the bone (as in figures 8-10 and 15). Alternatively, the arms 20 may be provided with sharp terminal edges 108 so as to lodge within a blind bore produced in a bone to serve as an anchor for fixing bone portions relative to one another (as in figures 13, 14 and 16). The arms 20 may be of one piece with the head 12, the entirety being made of plastic "ductile enough to allow for fashioning a living hinge between each arm and the head" (column 15, lines 30-34). The head may be associated with a variety of connectors, such as the threaded shaft 110 shown in figures 13 and 14, the threaded shaft 150 shown in figure 16, and the bundle of threads 36 shown in figures 8, 9, 12 and 15. In figures 8, 9, 12 and 15 the thread bundle is used in the manner of a suture, extending through both bone and other tissue intermediate two bones; note particularly figure 15.

We think that the method recited in appellant's claims 5, 6, 12, 15, 19 and 20 does not differ from that which is taught by Freedland in any unobvious manner. Freedland's head 12 and

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arms 20, particularly when formed as a single piece of plastic with the several arms connected to the head by living hinges, define a member to which a suture 36 is attached. When used in a manner similar to that shown in Freedland's figures 14 and 16 for lodging within a blind bore which has been created in a bone by the surgeon, it is necessarily the case that the surgeon presses the member with attached suture into the hole. That being the case, all of the limitations of claim 5 are met by Freedland. Evidence establishing lack of novelty in the claimed invention necessarily evidences obviousness. Lack of novelty is the ultimate or epitome of obviousness. See *In re Fracalossi*, 681 F.2d 792, 215 USPQ 569 (CCPA 1982); *In re Pearson*, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974). The depth of anchoring illustrated in figures 14 and 16 of Freedland indicate that the hole forming step involves making the hole in which the member lodges of a depth greater than that of the cortical layer. Freedland's method also involves attaching tissue to bone, whether the attached tissue is itself bone (as in figures 14 and 16) or other tissue (as in figure 15). Fabricating the member as a single piece of plastic necessarily provides response for claim 15 -- plastic pliable enough to form a living hinge is necessarily resilient, at least to the degree necessary to permit flexion.

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Because of use of plural threads in the thread bundle which defines the suture of Freedland, any two threads will constitute two contiguous segments of the suture, as recited in the appellant's claim 19. The change in shape which occurs in movement between the fully folded and unfolded (or partially unfolded) conditions of Freedland may be considered a deformation of the member, thus making the member "deformable" as required by claim 20.

We do not rely upon the teachings of Bivins in reaching our conclusions stated above, finding ourselves in agreement with the appellant's arguments that there is nothing to fairly suggest modifying Freedland by Bivins and that any modification of the type posited by the examiner would make Freedland's device inoperable for its intended purpose.¹¹ Nor are we able to sustain the rejection of claims 13, 16, 17 and 18, finding nothing in Freedland which teaches or makes obvious the subject matter of those claims. On the other hand, we do not find the appellant's arguments persuasive of error in our assessment of the teachings of Freedland and the manner in which those

¹¹ Bivins relates to method and apparatus for reattaching a portion of a human skull removed for autopsy to the rest of the skull for purposes of making the body presentable for burial. Bivins attaches one anchor to the skull by a screw through a drilled hole in the removed portion and another anchor to the topmost vertebra by use of a plug driven into the space formerly occupied by the spinal cord.

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teachings provide response for what the appellant has recited in claims 5, 6, 12, 15, 19 and 20. We think that the surgeon must necessarily press the member of Freedland, directly or by way of a tool, to advance it along the blind bore to its place of lodgement. Nothing in the mere recitation of "pressing" requires a resilient reaction of the member into engagement with the bone. We see nothing wrong in construing bone as "tissue"; certainly, the appellant does not deny that bone is tissue. At any rate, tissue other than bone is also fixed to bone in Freedland, as we have noted above.

In summary, we have (1) affirmed the rejection of claims 5, 6, 12, 15, 19 and 20 under 35 USC 103, designating the affirmance a new ground of rejection pursuant to 37 CFR 1.196(b), and (2) reversed the examiner's rejection of claims 13, 16, 17 and 18.

Any request for reconsideration or modification of this decision by the Board of Patent Appeals and Interferences based upon the same record must be filed within one month from the date of the decision (37 CFR 1.197). Should appellant elect to have further prosecution before the examiner in response to the new rejection under 37 CFR 1.196(b) by way of amendment or showing of facts, or both, not previously of record, a shortened statutory period for making such response is hereby set to expire two months from the date of this decision.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR 1.136(a).

AFFIRMED-IN-PART 37 C.F.R. 1.196(B)

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VERLIN R. PENDEGRASS)
Administrative Patent Judge)

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BRUCE H. STONER, JR.)
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