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D E C I S I O N
of 5 April 2005

Case Number: T 0400/04 - 3.2.2

Application Number: 95100839.0

Publication Number: 0666069

IPC: A61F 2/36

Language of the proceedings: EN

Title of invention:
A prosthesis for implantation in the femur

Patentee:
Sulzer Orthopedics Ltd

Opponent:
Waldemar Link GmbH & Co

Headword:
-

Relevant legal provisions:
EPC Art. 52, 56

Keyword:
"Inventive step - (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0400/04 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 5 April 2005

Appellant: (Opponent)	Waldemar Link GmbH & Co. Barkhausenweg 10 D-22339 Hamburg (DE)
Representative:	Glawe. Delfs. Moll Patentanwälte Postfach 26 01 62 D-80058 München (DE)
Respondent: (Proprietor of the patent)	Sulzer Orthopedics Ltd. Grabenstrasse 25 CH-6340 Baar (CH)
Representative:	Di Francesco, Gianni Ing. Barzanò & Zanardo Milano S.p.A. Corso Vittorio Emanuele II, 61 I-10128 Torino (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 15 December 2003 rejecting the opposition filed against European patent No. 0666069 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: T. K. H. Kriner
Members: D. Valle
E. J. Dufrasne

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal on 25 February 2004 against the decision of the opposition division posted on 15 December 2003 to reject the opposition against the European patent EP-B-666 069. The fee for the appeal was paid simultaneously and the statement setting out the grounds for appeal was received on 26 April 2004.

II. The Opposition division held that the ground for opposition mentioned in Article 100(a) EPC (lack of novelty and inventive step) did not prejudice the maintenance of the patent as granted.

III. The following documents, cited during the opposition proceedings are relevant for the present decision:

D3: EP-A-0 579 868

D8: Panminerva Medica, 25, 1983, pages 231-239, F. Pipino, P. M. Calderale, "A biequatorial hip prosthesis".

IV. Oral proceedings took place on 5 April 2005.

The appellant requested that the decision under appeal be set aside and that the European patent be revoked. Furthermore he requested that Mr Cometti be heard as a witness.

The respondent (patentee) requested that the appeal be dismissed and that the patent be maintained on the basis of claims 1 and 2 filed during the oral proceedings.

V. Claim 1 reads as follows:

"A femoral prosthesis for the joint between the hip and the femur, comprising a curved metal stem (2) elliptical in cross-section and tapered downward, for inserting in a cavity (14) of the bone without cement after resecting just beneath the capitellum of the same, preserving the neck (16) integral, an elliptical collar (7) of greater section in comparison with the stem integral thereto, for stopping and resting said prosthesis on the plane of resection of the bone (17), a neck (10) integral with the collar and connectable to a spherical head (12); characterized in that:
a) the collar (7) has a rim protruding all around the stem (2), and
b) the centre of rotation of the prosthesis, comprising its acetabulum seat, is positioned on the axis (E) of the neck (10) at a distance ranging with a minimum of 19 mm and a maximum of 31 mm from the lover surface (6) of said collar (7)."

VI. In support of his request the appellant relied on the following submissions.

The subject-matter of claim 1 did not involve an inventive step having regard to the teaching of D8 (see in particular Figure 9). The only features of claim 1 not explicitly disclosed in D8 were an elliptical stem and collar. However these features were banal having

regard to the fact that D8 already showed a rounded stem and collar (see again Figure 9 and page 238, section 7) and that it explicitly declared that the shape of the cement-free stem copied the shape of the medullary canal (see page 238, section 7). Essentially there were only two choices for a rounded stem: an elliptical and a circular form. The choice of an elliptical stem was very common in the field of femoral prosthesis. The choice of a circular form represented an exception, rather than the norm. Having established that the elliptical form for the stem was obvious it followed just as obviously to adopt the same form for the collar. In any case a strict elliptical form in mathematical sense for the stem and even more for the collar did not have any technical meaning.

VII. The respondent disputed the views of the appellant. His arguments can be summarized as follows:

The term elliptical used in the claims meant strictly elliptical in the mathematical sense. D8 did not disclose an elliptical shape for the collar and the stem. Starting from D8 there was no one-way choice compelling the skilled person to choose an elliptical form for the stem and the collar. Document D3, originating from the same author (Pipino) as D8, disclosed a different solution, namely a circular shape for the section of the stem and the collar.

D8 was contradictory, since Figure 12 clearly showed an application of the prosthesis where the neck of the femur was completely cut, contrary to what was stated at page 235, left column, first paragraph of the chapter titled: "The femoral component (Fig. 9)" and

contrary to the claimed invention. In any case, the neck of the prosthesis of Figure 9 was very long and not suitable for preserving the neck of the femur, that is, D8 did not disclose that the centre of rotation of the prosthesis, comprising its acetabulum seat, was positioned on the axis of the neck at a distance ranging within a minimum of 19 mm and maximum of 31 mm from the lower surface of the collar.

Reasons for the Decision

1. The appeal is admissible.

2. *Inventive step*

2.1 D8, which is considered to represent the most relevant state of the art, discloses (see in particular Figure 9 at page 235) a femoral prosthesis for the joint between the hip and the femur, comprising a curved metal stem tapered downward, said stem being suitable for inserting in a cavity of the bone without cement (see paragraph bridging pages 237 and 238 and section 7 at page 238) after resecting just beneath the capitellum of the same, preserving the neck integral (see page 235, left column, first paragraph of the chapter having the title: "The femoral component (Fig. 9)"), a collar of greater section in comparison with the stem integral thereto, for stopping and resting said prosthesis on the plane of resection of the bone, a neck integral with the collar and connectable to a spherical head; the collar having a rim protruding all around the stem, and the centre of rotation of the prosthesis, comprising its acetabulum seat, being positioned on the

axis of the neck at a distance ranging with a minimum of 19 mm and a maximum of 31 mm from the lover surface of said collar.

However, D8 does not explicitly disclose that the metal stem and the collar are elliptical in cross section.

2.2 The appellant's statement that D8 does not disclose a centre of rotation of the prosthesis which is positioned on the axis of the neck at a distance ranging with a minimum of 19 mm and a maximum of 31 mm from the lower surface of said collar is not convincing.

Figure 9 in conjunction with the passage at page 236, right column, lines 5 to 9 clearly shows that the distance shown in Figure 9 falls within the claimed range. Figure 9 is a photograph of a hip prosthesis and therefore shows the real proportions of this prosthesis. Since the above cited passage states that the head of the prosthesis reproduced in Figure 9 has a diameter of 22 mm, and since the head diameter in the picture is 18 mm and the distance of the centre of rotation of the prosthesis from the lower surface of the collar in the picture is 24 mm, the real distance of the centre of rotation of the depicted prosthesis is (22 x 24) / 18 = 29 mm, which is comprised in the claimed range of values of 19 to 31 mm.

Furthermore, contrary to the assertion of the respondent, the board does not see D8 as a contradictory document. The description of Figure 9 unequivocally explains that the main virtue of the prosthesis according to this figure is that the femoral neck can be resected at a very high, almost subcapital

level. For the skilled person it is obvious that this is only possible if the femoral neck is not affected with disease, as also pointed out in the description of the patent in suit (see column 1, lines 41 and 42). Therefore, although Figure 12 of D8 shows an example of a biequatorial hip prosthesis implantation where the femoral neck is not resected at a very high level, this is not in contradiction to the teaching given in connection with Figure 9.

2.3 Starting from D8, the object underlying the patent in suit is to be seen in providing a cement free prosthesis which fits snugly into the bone cavity and a collar which assures a good distribution of the forces on the head of the resected bone.

This object is achieved by the provision of a stem and a collar which are elliptical in cross-section.

2.4 D8 suggests that the cement-free stem copies the shape of the medullar canal (see page 238, left column, section 7). Since this canal has an essentially elliptical cross-section, the selection of a stem having an elliptical cross-section was obvious for the skilled person, in particular in the light of the object cited above. Furthermore it was also obvious to select for the collar a shape which reproduces the elliptical form of the stem.

Since the patent in suit does not describe any technical effect which might be achieved by the selection of a stem and a collar having an elliptical cross-section in a strict mathematical sense, such a

particular selection can only be regarded as a design option without any technical meaning.

2.5 The respondent's argument that there was a multiple choice for the form of the stem and of the collar and that therefore the skilled person would not have necessarily choosen an elliptical cross-section for the stem and the collar is not convincing, since D8 suggests a stem having a cross-section which is adapted to the medullar canal. The skilled person, faced with the problem of adapting the form of the stem to the bone cavity would therefore have selected from the narrow available choice (oval, elliptical) the most suitable one, and not the circular one shown in D3, since this selection was against the teaching of D8.

2.6 From the above considerations, it follows that the subject-matter of claim 1 of the request does not involve an inventive step.

3. The appellant's request that Mr Cometti be heard as a witness was refused for the following reasons. According to the appellant, the hearing of Mr Cometti should have shown that the so-called Pipino-prosthesis corresponded to the prosthesis of claim 1, and had been publicly used before the priority date of the patent in suit. However, on the basis of the evidence presented before the oral proceedings, such a hearing did not appear to be suitable for proving beyond any reasonable doubt the public prior use of a prosthesis as claimed in the patent in suit.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

V. Commare T. Kriner