

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* BRET FERREE

---

Appeal 2007-3762  
Application 10/422,282  
Technology Center 3700

---

Decided: October 31, 2007

---

Before TONI R. SCHEINER, DONALD E. ADAMS, and DEMETRA J. MILLS, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 1, 2, 5-8, and 10, the only claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

## INTRODUCTION

The claims are directed to a disc spacer. Claims 1 and 10 are representative:

1. A disc spacer, comprising:

a device having at least one spherical interface involving convex and concave surfaces, and wherein the device is configured to articulate with respect to at least one vertebral endplate.

10. The disc spacer of claim 1, wherein the device is adapted to articulate with an upper and a lower vertebral endplate.

The Examiner relies on the following prior art references to show unpatentability:

Büttner-Janz 5,556,431 Sep. 17, 1996

The rejection as presented by the Examiner is as follows:

Claims 1, 2, 5-8, and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Büttner-Janz.

We affirm.

## DISCUSSION

Claims 1, 2, 5-8, and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Büttner-Janz. Appellant provides separate arguments for two groups of claims: (1) claims 1, 2, and 5-8 and (2) claim 10. Accordingly, we limit our discussion to claims 1 and 10. Claims 2 and 5-8 will stand or fall together with claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

*Claim 1:*

Claim 1 is drawn to a disc spacer. The disc spacer comprises a device that:

- (1) has at least one spherical interface involving convex and concave surfaces, and
- (2) is configured to articulate with respect to at least one vertebral endplate.

The Examiner finds that Büttner-Janz teaches a disc spacer that meets the requirements of Appellant's claim 1 (Answer 4). For clarity we reproduce Büttner-Janz's Figure 1 below:

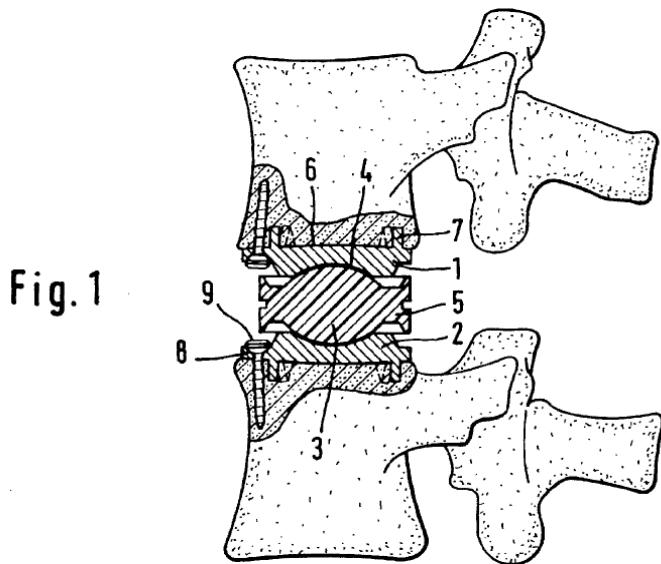


Figure 1 is stated to show "a median section of a first embodiment of the prosthesis<sup>[1]</sup> between two vertebrae" (Büttner-Janz, col. 2, ll. 28-29).

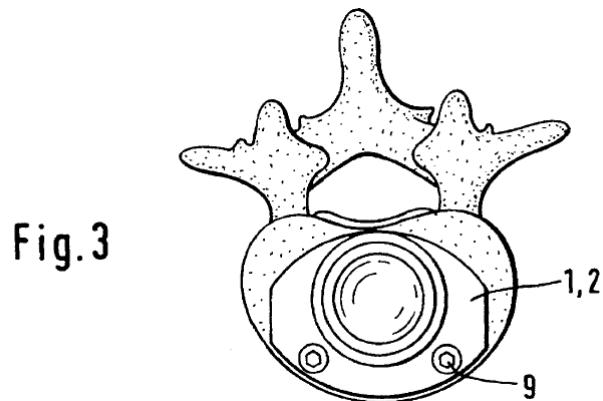
With reference to Figure 1, the Examiner finds that Büttner-Janz teaches a disc spacer having two interfaces – one at the bottom surface of 3 and one at the top surface of 3 (Answer 4). More specifically, the Examiner

---

<sup>1</sup> According to Büttner-Janz, the prosthesis is an "intervertebral disc endoprosthesis" (Büttner-Janz, Abstract, *see also* Title) - a disc spacer.

finds that Büttner-Janz teaches that these interfaces are convex (*id*). According to Büttner-Janz, the “prosthesis plates 1, 2 and the prosthesis core 3 cooperate via spherical articular surfaces 4” (Büttner-Janz, col. 2, l. 42, emphasis removed). In other words, the convex surfaces of element 3, interact with the concave surfaces of elements 1 and 2 (Answer 4). We agree and note that Appellant does not dispute this finding. Accordingly, we agree with the Examiner that Büttner-Janz teaches a disc spacer comprising a device that has at least one spherical interface involving convex and concave surfaces.

Büttner-Janz’s device is inserted between two vertebrae and is connected to the endplates of the vertebrae (Büttner-Janz, Abstract). In addition, Büttner-Janz teaches that, as illustrated in Figure 3, “[t]he center of articulation of the prosthesis is displaced towards the rear relative to the center of the vertebral endplates . . .” (Büttner-Janz, Abstract). For clarity we reproduce, Figure 3 below



According to Büttner-Janz, the displacement of the centre of articulation towards the rear reduces the forces which push the prosthesis towards the front as a result of the wedge-shaped opening of the vertebral space (Büttner-Janz, col. 1, ll. 44-47), in addition to providing sufficient space in

the ventral edge area of the prosthesis plates 1, 2 to receive the bone screws 9 (Büttner-Janz, col. 2, ll. 57-61).

According to the Examiner, Büttner-Janz's device is configured to articulate with respect to at least one vertebral endplate, or relative to both vertebrae (Answer 4-5: bridging sentence). In contrast, Appellant asserts that "the device of Büttner-Janz includes two components which articulate with each other, but neither one of them articulate with respect to at least one vertebral endplate. Rather, they are fused to the endplates using spikes for attachment purposes" (Br. 4). Therefore, the issue on this appeal is whether Büttner-Janz teaches a disc spacer that is configured to articulate with respect to at least one vertebral endplate.

According to claim 1, Appellant's device is configured to articulate with respect to (e.g., relative to<sup>2</sup>) at least one vertebral endplate. However, as the Examiner points out, there is no requirement in Appellant's claimed invention "that the device contact[s] the vertebrae" (Answer 5). To the contrary, the Examiner finds that Appellant's claim 1 simply requires that the device "move relative to the vertebrae" (*id.*).

Accordingly, the issue distills down to what is encompassed by Appellant's use of the phrase "articulate with respect to" as it appears in claim 1. Our mandate is to give claims their broadest reasonable interpretation.

Giving claims their broadest reasonable construction 'serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.'

*Yamamoto*, 740 F.2d at 1571; accord *Hyatt*, 211 F.3d at 1372; *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989) ('An essential

---

<sup>2</sup> Answer 5.

purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.’).

*In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004).

To articulate is to “join to allow movement: to form the kind of joint or connection that allows movement” (<http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861586978>). Therefore the device of Appellant’s claim 1 is configured so that the device and vertebrae are connected in a manner that allows movement. There is no dispute on this record that Büttner-Janz’s device is configured in a manner that allows movement. The question is whether Büttner-Janz’s device moves with respect, reference, or in relation<sup>3</sup> to at least one vertebral endplate.

As discussed above, and illustrated in Büttner-Janz’s Figure 1, Büttner-Janz’s device is inserted between two vertebrae and is connected to the endplates of the vertebrae. Therefore, we agree with Appellant that Büttner-Janz’s device comprises two components (elements 1 and 2<sup>4</sup>) which articulate with respect to each other (Br. 4). Accordingly, with reference to Büttner-Janz’s Figure 1, as the lower vertebrae moves - element 2 articulates with respect to the upper vertebrae’s base plate to which element 1 is

---

<sup>3</sup> Merriam-Webster’s defines the phrase “with respect to” as “with reference to” or “in relation to” (<http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=with+respect+to>).

<sup>4</sup> The two components to which Appellant refers are those which “are fused to the endplates using spikes for attachment purposes” (Br. 4) - specifically elements 1 and 2.

attached. Therefore, if element 1 articulates with respect to element 2, element 1 will necessarily articulate with respect to the vertebral base plate to which element 2 is attached. The same is true of element 2 and the vertebral base plate to which element 1 is attached. Stated differently, Büttner-Janz's device is configured to articulate with respect to at least one vertebral endplate. Therefore, we disagree with Appellant's assertion that Büttner-Janz's components do not articulate with respect to at least one vertebral endplate (Br. 4).

The burden is on the Examiner to set forth a *prima facie* case of unpatentability. *In re Glaug*, 283 F.3d 1335, 1338, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002). 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, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001). For the foregoing reasons we find no error in the Examiner's *prima facie* case of anticipation. Accordingly, we affirm the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Büttner-Janz. Claims 2 and 5-8 fall together with claim 1.

*Claim 10:*

Claim 10 depends from and further limits the disc spacer of claim 1, wherein the device is adapted to articulate with an upper and a lower vertebral endplate. The Examiner relies on Büttner-Janz as discussed above. Appellant asserts that Büttner-Janz's device is not "adapted to articulate *with an upper and a lower vertebral endplate*" (Br. 4).

As discussed above, if element 1 articulates with respect to element 2, element 1 will necessarily articulate with respect to the vertebral base plate

Appeal 2007-3762  
Application 10/422,282

to which element 2 is attached. The same is true of element 2 and the vertebral base plate to which element 1 is attached. Stated differently, Büttner-Janz's device is adapted to articulate with an upper and a lower vertebral endplate.

For the foregoing reasons we affirm the rejection of claim 10 under 35 U.S.C. § 102(b) as being anticipated by Büttner-Janz.

#### CONCLUSION

In summary, we affirm the rejection of claims 1 and 10 under 35 U.S.C. § 102(b) as being anticipated by Büttner-Janz. Claims 2 and 5-8 fall together with claim 1.

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

AFFIRMED

Ssc

GIFFORD, KRASS, SPRINKLE, ANDERSON  
& CITKOWSKI, P.C.  
P.O. BOX 7021  
TROY, MI 48007-7021