UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte CLAYTON P. KORVER and VINCE S. HURSH

Appeal 2008-1831
Application 10/368,923
Technology Center 3700

Decided: August 12, 2008

Before DEMETRA J. MILLS, ERIC GRIMES, and JEFFREY N. FREDMAN, *Administrative Patent Judges*.

FREDMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a device for positioning a patient for treatment which the Examiner has rejected as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Background

"Patient positioning systems are used for accurate and reproducible positioning of a patient for radiation therapy, diagnostic imaging, surgery, and other medical procedures. During these procedures, it is important to immobilize a part or parts of the patient's body" (Spec. 1). The Specification notes that "[o]ne example of such a patient positioning system is the Exact Indexed Immobilization system . . . The Exact system utilizes a tabletop with indentations along opposite sides, and a lock bar extending across the tabletop with a disk at each end adapted to be received in opposing indentations" (Spec. 1).

Statement of the Case

The Claims

Claims 1-18 are on appeal. We will focus on claims 1 and 14, which are representative and read as follows:

> 1. A device for positioning a patient for treatment comprising:
>
> a table for supporting the patient, the table having opposite sides with indexing nodules extending outwardly along each side;
>
> a lock bar having opposite ends with a recess extending outwardly on each end to retentively engage opposing pairs of the nodules on each side of the table; and
>
> a patient restraint member mated to the lock bar.
>
> 14. The device of claim 1 wherein the nodules and recesses are each defined by a surface portion of a sphere.

The prior art

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

Tang	US 6,161,237	Dec. 19, 2000
Kolody	US 6,598,275 B1	Jul. 29, 2003

The issues

The rejection as presented by the Examiner is as follows:

Claims 1-18 stand rejected under 35 U.S.C. § 103(a), as being obvious over Tang and Kolody (Ans. 3).

35 U.S.C. § 103(a) rejection over Tang and Kolody

The Appellants argue that "each of independent claims 1, 8 and 13 require indexing nodules or male projections extending outwardly along each side or edge of the table, and outwardly extending recesses or female recesses on the ends of the lock bar to receive or engage the male nodules" (App. Br. 5). Appellants contend that these "limitations are not met by either the Tang or Kolody references, relied upon by the Examiner in the obviousness rejection of the claims" (App. Br. 5).

The Examiner argues that it is a "mere reversal of parts to place the nodules on the side of the table versus on the side of the lock bar and to place the recesses in the locking bar versus the recess being on the side of the table." (Ans. 3.)

Appellants then address the Examiner's reasoning regarding reversal of parts, arguing that "[a]s the Federal Circuit has explained, rearrangement of parts does not create obviousness when the parts have considerable differences. *Kegel Co. Inc. v. AMF Bowling Inc.*, 127 F.3d 1420, 44

U.S.P.Q.2d (BNA) 1123 (Fed Cir. 1997)" (App. Br. 6). Appellants also contend that the "continuous rail and clamp arrangement of Kolody does not provide the repeatability and accurate placement of discrete nodules and recesses" (App. Br. 7). Appellants argue that "[a] mere reversal of parts would have placed the ball 28 from the Tang bar 18 onto the sides of the table. As seen in Figures 2 and 3 of the present application, the sides of the table 12 do not have balls thereon" (App. Br. 9).

The Examiner responds that "one of ordinary skill in the art would recognize that the circular nodules disclosed by Tang could be spherical shaped as taught by Tang and Kolody" (Ans. 3). The Examiner argues that Kolody provides "a teaching to provide nodules on the side of a table. The nodules are inserted into a recess on the side of the table. Also, Tang teaches that the nodules (28) can be any shape as long as they provide a snap fit." (Ans. 4).

In view of these conflicting positions, we frame the obviousness issue before us as follows:

Would it have been obvious to a person of ordinary skill to modify Tang to utilize indexing nodules that extend outwardly and engage a lock bar in the place of inwardly extending nodules in view of Kolody?

Findings of Fact (FF)

1. Tang teaches that the "interlock system of the present invention is particularly useful for accurate and repeatable patient positioning for radiation therapy treatment" (Tang, col. 2, ll. 29-31).

2. Tang teaches a "table base or carriage **10** is provided with a tabletop **12 .** . . . The tabletop **12** has a plurality of notches **16** along the

opposite sides . . . . The notches **16** serve as indexes for repeated treatment of individual patients" (Tang, col. 2, ll. 35-40).

3. Tang teaches a "lock bar **18** includes a male extension **28**, preferably in the shape of a ball" (Tang, col. 2, ll. 45-46).

4. Tang teaches that the "male extension **28** of the lock bar **18** may take shapes other than spherical, as shown in the drawings, with the alternative shapes providing a snap-fit connection between the lock bar **18** and the notches **16** of the tabletop **12**" (Tang, col. 2, ll. 48-52).

5. Tang teaches that the "lock bar **18** also includes a pair of upwardly extending studs **32 .** . . . The studs **32** are adapted to matingly register with holes **20B** of the patient restraint device **20** so that the device **20** is positioned on the lock bar **18**" (Tang, col. 2, ll. 52-56).

6. Kolody discloses a table 60 which has an outwardly extending engagement element 76 (*see* Kolody, fig. 4).

Discussion of 35 U.S.C. § 103(a) over Tang and Kolody

Claim 1

Tang teaches a device for positioning a patient for treatment comprising a table with indexing nodules (FF 1-2). Tang teaches that the indexing nodules engage with a lock bar by a snap fit connection (FF 3-4). Tang teaches that the shape of the engagement element may vary (FF 4). Tang teaches that the lock bar is mated to a patient restraint member (FF 5).

The Examiner acknowledges that Tang does not teach an indexing nodule which extends outwardly, but rather teaches only an inward indexing nodule (Ans. 3). The Examiner relies upon Kolody for the disclosure that

engagements between examining tables and bars may use outwardly extending engagement elements (FF 6).

The obviousness case rests on whether a person of ordinary skill in the art would have considered it obvious to modify Tang to use an outwardly extending nodule for engagement in the place of an inwardly extending nodule.

We conclude that the Examiner has set forth a prima facie case that claim 1 would have been obvious to the ordinary artisan in view of Tang and Kolody. In *KSR*, the Supreme Court indicated that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability." *KSR Int'l v. Teleflex Inc*., 127 S. Ct. 1727, 1740 (2007). In the instant case, substituting an outwardly extending nodule, as shown by Kolody, for the inwardly extending nodule of Tang would have been a known and predictable variant snap-fit engagement method (*see* FF 3-6).

While we agree with Appellants that "there is no mechanical rule that reversal of parts is automatically obvious" (App. Br. 6), the Supreme Court noted that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 127 S. Ct. at 1742. In the context of the instant invention, reversal of parts for engagement to switch the male engagement part of Tang for the female part without any alteration in the function of the parts represents a situation where the "combination of familiar elements

according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 127 S. Ct. at 1739.

We are not persuaded by Appellants' arguments that "Kolody also does not teach nodules and recesses. The accessory clamp 114 in Kolody attaches to a continuous single-sided rail 70" (App. Br. 7). In our opinion, when Kolody teaches an outwardly extending engagement element, even as part of a continuous rail, this reasonably demonstrates to the ordinary practitioner that an inwardly extending nodule of Tang would function if reversed (FF 5-6).

We are also not persuaded by Appellants' argument that a "'mere reversal' of parts would place semi-cylindrical notches on the bar, which has not happened in the present invention, as is clear from the drawings" (App. Br. 8). In fact, Tang teaches that the male extension is ball shaped, which would be "hemispherical" (FF 3). Consequently, reversing the elements of Tang as indicated by Kolody would reasonably be expected to result in the ball "male" element being placed at the nodule positions with a female ball engagement element functioning on the lock bars (FF 3-6). This is particularly evident since Tang teaches that the "male extension **28** of the lock bar **18** may take shapes other than spherical" (Tang, col. 2, ll. 48-49).

We also reject Appellants' argument that "obviousness cannot be established without evidence of a motivating force" (App. Br. 10). "The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR*, 127 S. Ct. at 1741. In our opinion, the ordinary practitioner would have found the reversal of parts of the Tang indexing nodules obvious, particularly in light of the

engagement mechanism of Kolody, since the ordinary practitioner would have recognized that the snap-fit attachment could function with either a male or female indexing nodule (*see* FF 4-6).

Appellants also argue that the Langton declaration overcomes the obviousness rejection since a comparison of the Tang table and what Appellants characterize as the "indexing system of the present invention" (App. Br. 12) shows reduced attenuation relative to the Tang table (*see* Langton Dec. ¶ 4). However, the Langton Declaration is not addressed to the differences between the claimed invention and the prior art.

The Langton Declaration does not explain whether the materials of which the Tang table and the tested table differ in any way other than the locking bar mechanism and indexing nodules (*see* Langton Dec. ¶ 3-5). Appellants' Specification suggests that "solid material on the edges of the Exact tabletop increases attenuation due to the increased density of the material, relative to the foam core of the tabletop" (Spec. 2:8-9). However, the claims include no limitations regarding the materials used on the edge of the tabletops whatsoever, so that the asserted unexpected results are not commensurate in scope with the claim. *See In re Harris*, 409 F.3d 1339, 1344 (Fed. Cir. 2005)("The Board also correctly reasoned that the showing of unexpected results is not commensurate in scope with the degree of protection sought by the claimed subject matter").

The Langston declaration also shows that the prior art panel was superior at 6 MV while the "claimed" panel was superior art 18 MV (*see* Langton Dec. 3). There is no explanation of this in the Declaration or Specification.

Additionally, the Langton Declaration does not describe the results as unexpected, rather simply identifying the results as "improved" (*see* Langton Dec. ¶ 5). To the extent that the improved attenuation is simply due to the reduction in blocking mass resulting from the rearrangement of parts, the result would be the expected result. "Expected beneficial results are not evidence of nonobviousness". *See In re Skoner*, 517 F.2d 947, 950 (CCPA 1975).

Claim 14

Appellants argue that the subject matter of claim 14 differs from that of the prior art in that "the recesses are defined by a surface portion of a sphere" (App. Br. 13). While Appellants acknowledge that in Tang, "the male members are spherical balls, and their female recesses are semi-cylindrical" (App. Br. 13), Appellants conclude that these are not "semi-spherical in shape" (App. Br. 13).

Appellants' Specification indicates that "[w]hile the nodules 20 are shown in the drawings as being spherical in shape, it is understood that the nodules may have other shapes" (Spec. 4:1-2). In the absence of any specific definition of either "surface portion of a sphere" (claim 14) or "semispherical" (Claim 16), we give this term its broadest reasonable interpretation. *See, e.g., In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) ("[D]uring examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification."). We disagree with Appellants' conclusion that Tang does not teach components which are broadly "spherical", since the spherical balls are reasonably construed as having a "suface portion of a sphere" and being "semispherical" (FF 3-4).

CONCLUSION

In summary, we affirm the rejection of claims 1 and 14 under 35 U.S.C. § 103(a). Pursuant to 37 C.F.R. § 41.37(c)(1)(vii)(2006), we also affirm the rejections of claims 2-13 and 15-18 as these claims were not argued separately.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

Ssc:

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