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## United States Court of Appeals for the Federal Circuit

04-1038

UTICA ENTERPRISES, INC.,

Plaintiff-Appellant,

v.

FEDERAL BROACH AND MACHINE COMPANY,

Defendant-Appellee.

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DECIDED: August 19, 2004

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Before MAYER, Chief Judge, LOURIE and LINN, Circuit Judges.

Opinion for the court filed by Circuit Judge LOURIE. Chief Judge MAYER dissents.

LOURIE, Circuit Judge.

### DECISION

Utica Enterprises, Inc. appeals from the decision of the United States District Court for the Eastern District of Michigan entering final judgment of noninfringement of United States Patent 6,256,857 in favor of Federal Broach and Machine Company. Utica Enters., Inc. v. Fed. Broach & Mach. Co., No. 01-cv-74655 (E.D. Mich. Sept. 11, 2003) (“Judgment”). Because the court erred in its claim construction, we vacate and remand.

### BACKGROUND

The technology in this case relates to “broaching,” or a metal-removing process that uses a precision cutting tool to finish metal surfaces. Utica owns the ’857 patent, which is directed to methods for retaining a broach cutting tool in a tool holder. Independent claims 1 and 3 recite, inter alia, the step of positioning two planar abutment surfaces of the cutting tool contiguous to two complementary planar abutment surfaces of the tool holder to establish a “predetermined accurate work position.” Claims 1 and 3 also recite the step of “locking” the cutting tool in its predetermined accurate work position by imposing a locking force on a third planar abutment surface of the cutting tool. Claim 1 reads, in relevant part, as follows:

A method of retaining a broach cutting tool member in a broach tool holder, said broach tool holder comprising:

...

said broach cutting tool member comprising . . . a peripheral outer surface . . . , said peripheral outer surface having two planar abutment surfaces disposed along said peripheral outer surface and extending perpendicularly to said top end surface and said bottom end surface of said broach cutting tool member, said two planar abutment surfaces adapted to be complementary, respectively, to said first planar and second planar abutment surfaces, disposed on said broach cutting tool holder . . .

said method comprising the steps of positioning said two planar abutment surfaces of said broach cutting tool member contiguous said first planar and said second planar abutment surfaces, respectively, of said broach tool holder and simultaneously locating said bottom end surface of said broach cutting tool member on said intermediate surface of said broach tool holder whereby when said broach cutting tool member is positioned in said broach tool holder a predetermined accurate work position is established for said broach cutting tool member; and

locking said broach cutting tool member in said predetermined accurate work position, by imposing a locking force on said at least a portion of said third planar abutment surface of said broach cutting tool member, said locking force having a force component directed towards said two planar abutment surfaces of said broach cutting tool member and a force component directed downward from said top surface towards said intermediate surface of said broach tool holder to securely hold said broach cutting tool member in said broach tool holder.

’857 patent, col. 7, l. 26 to col. 8, l. 11 (emphases added). Similarly, claim 3 reads as follows:

A method of retaining a broach cutting tool member in a broach tool holder . . . , said method comprising the steps of:

...

positioning said first and second planar surfaces on said one of said broach cutting tool member and said broach tool holder contiguous to said respective complementary first and second planar surfaces on said

other of said broach cutting tool member and said broach tool holder whereby when said one of said broach cutting tool member and said broach tool holder is positioned contiguous to said other of said broach cutting tool member and said broach tool holder a predetermined accurate work position is established; and

locking said one of said broach cutting tool member and said broach tool holder in said predetermined accurate work position by imposing a locking force on said at least a portion of said third planar surface whereby said locking force generates a force component in a direction downward from said first top surface towards said second lower surface and a force component towards said first and second planar surfaces of one of said broach cutting tool member and said broach tool holder.

Id., col. 8, ll. 16-67 (emphases added). Claims 6 and 7 depend from claim 3.

In December 2001, Utica filed suit against Federal Broach for infringement of claims 1, 3, 6, and 7 of the '857 patent. Federal Broach filed a counterclaim alleging invalidity. After holding a Markman hearing, the court construed the disputed claim terms. First, the court concluded that the recited tool holder must be a single, one-piece structure upon which the planar abutment surfaces are formed as a unitary part. Utica Enters., Inc. v. Fed. Broach & Mach. Co., Civ. No. 01-74655, slip op. at 8 (E.D. Mich. Apr. 15, 2003) ("Claim Construction Order"). Second, the court interpreted the term "predetermined accurate work position" to refer to the fixed placement of the cutting tool in the tool holder such that the flat mounting surfaces of the tool directly contact the corresponding surfaces of the tool holder "without any spaces in between." Id. at 11. Third, the court construed the "locking" limitations as step-plus-function limitations that are limited to the use of a single wedge-like device with two tapered edges or one tapered edge as described in the specification, and its equivalents. Id. at 15. Based on the court's claim construction order, the parties stipulated that none of Federal Broach's cutting tools or tool holders infringe any claim of the '857 patent either literally or under the doctrine of equivalents, and Federal Broach agreed to dismiss its invalidity counterclaim without prejudice. Utica Enters., Inc. v. Fed. Broach & Mach. Co., No. 01-cv-74655 (E.D. Mich. Sept. 11, 2003) ("Stipulated Order"). The district court subsequently entered a final judgment of noninfringement. Utica Enters., Inc. v. Fed. Broach & Mach. Co., No. 01-cv-74655 (E.D. Mich. Sept. 11, 2003) ("Judgment").

Utica timely appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

The only issues on appeal relate to claim construction. Claim construction is a question of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996), that we review de novo, Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

#### A. Single- vs. Multi-Piece Tool Holder

Utica first argues that the district court erred in construing claims 1 and 3 to require that the recited tool holder be a single, one-piece structure. According to Utica, the claimed method can be practiced regardless whether the tool holder is a unitary structure or a multi-piece assembly and the court should not have limited the claims to the preferred embodiment. Federal Broach responds that the court was correct to require the tool holder to be machined from a single piece of metal because a one-piece structure is necessary to eliminate accumulated tolerances between the cutting tool and the tool holder.

We agree with Utica that the district court erred in interpreting claims 1 and 3 to require that the recited tool holder be a single, one-piece structure. As an initial matter, the claims themselves do not address whether the tool holder must be a one-piece structure or may be constructed from multiple pieces. The district court concluded nonetheless that a multi-piece tool holder would frustrate claim 1's instruction that the cutting tool's planar abutment surfaces be "complementary . . . to" the tool holder's planar abutment surfaces. Claim Construction Order, slip op. at 7. The claims, however, state only that two of the cutting tool's planar abutment surfaces are positioned "contiguous to" the tool holder's complementary planar abutment surfaces. Far from demanding a unitary structure for the tool holder, that claim language simply describes how the cutting tool and the tool holder are to be aligned with respect to one another.

Turning to the specification, we still find no indication that the tool holder must be machined from a single piece of metal. The specification discloses that one aim of the invention is to eliminate clearances between the cutting tool and the tool holder, '857 patent, col. 2, ll. 61-64, and it further represents that the claimed method eliminates the built-in error inherent in the prior art devices' use of V-shaped wedges or keys to establish the radial position of the tool in the tool holder, id., col. 3, ll. 43-

55. Relying on those statements, the district court determined that Utica had distinguished its claimed invention over multi-piece tool holders that generate clearances between the cutting tool and the tool holder and, as a result, concluded that the recited tool holder must be a one-piece structure. Claim Construction Order, slip op. at 8. Again, we disagree with the court's analysis. Although the specification discloses that the invention leads to improved accuracy over the prior art in positioning the cutting tool against the tool holder, it does not indicate that only a one-piece tool holder can achieve that advance. To be sure, the specification's drawings depict the tool holder as a one-piece structure in the two disclosed embodiments. '857 patent, figs. 1 & 5. However, the specification teaches that the way in which the planar surfaces of the cutting tool and the tool holder are forced against one another is what contributes to the improved accuracy in positioning the tool in the tool holder. The intrinsic record simply does not support the district court's finding that a multi-piece assembly used in accordance with the claimed method would be incapable of eliminating clearances between the planar surfaces of the cutting tool and the tool holder or that it would be incapable of achieving a more accurate positioning of the cutting tool.<sup>[1]</sup>

Finally, we reject Federal Broach's argument that the inventor's testimony demonstrates that the claimed invention requires the use of a one-piece tool holder. We decline to limit the scope of the claims based on such extrinsic evidence, for the claims and the specification make clear that the recited tool holder need not be machined from a single piece of metal. See Vitronics Corp. v. Conceptor, Inc., 90 F.3d 1576, 1584 (Fed. Cir. 1996). In any event, the inventor's testimony is at best ambivalent: the inventor stated in a deposition that he understood the planar surface to be formed on the body of the tool holder; and he testified at the Markman hearing that the claimed invention could be practiced using a tool holder constructed as a multi-piece assembly. For these reasons, we find Federal Broach's reliance on the inventor's testimony to be unhelpful to its claim construction argument.

In sum, we conclude that the district court erred in construing claims 1 and 3 to require that the recited tool holder be a unitary, one-piece structure. Instead, whether the accused multi-piece tool holder can be used to perform the claimed method is a factual question that should be considered in an infringement analysis. The district court may address that question on remand.

B. “Predetermined Accurate Work Position”

Utica next asserts that the district court erred in construing the term “predetermined accurate work position” in claims 1 and 3. While agreeing with the court’s definition generally, Utica maintains that the court should not have interpreted the term to require that the planar abutment surfaces of the cutting tool and the tool holder be in direct contact “without any spaces in between.” Federal Broach responds that the specification and the prosecution history define the term “predetermined accurate work position” to mean that the planar abutment surfaces of the cutting tool and the tool holder engage without any gap between them.

We agree with Utica that the district court’s interpretation of the term “predetermined accurate work position” was unduly narrow. The court construed the term as follows:

[T]he term “predetermined accurate work position” means the fixed placement of the tool in the tool holder. This placement is achieved by precisely measuring the distance from the surface of the cutting tool’s center axis to the appropriate surfaces of the tool holder in advance, such that the flat mounting surfaces of the cutting tool directly contact the corresponding surfaces of the tool holder, without any spaces in between, thereby maintaining the cutting tool’s original placement until the tool is removed.

Claim Construction Order, slip op. at 18 (emphasis added).

Although the specification states that a goal of the invention is to eliminate clearances between the cutting tool and the tool holder, the patent does not require that the surfaces of the cutting tool and the tool holder abut with absolute precision. Indeed, it seems that no device—not even those depicted in the disclosed embodiments—could actually achieve zero clearance between the cutting tool and the tool holder. We instead read the specification to mean that the claimed method achieves improved accuracy in positioning the cutting tool by allowing for only minimal clearances between the tool and the holder. Moreover, the prosecution history statements to which Federal Broach adverts explain only that the planar abutment surfaces of the cutting tool and the tool holder are forced against one another to generate an accurate work position; they say nothing about eliminating gaps between the cutting tool and the tool holder. We therefore conclude that the patent does not mandate zero clearance between the cutting tool and the tool holder and, as a result, we modify the district court’s definition of the term

“predetermined accurate work position” to omit the language “without any spaces in between.”

### C. The “Locking” Limitations

Utica lastly argues that the district court erred in construing the “locking” limitations in claims 1 and 3 as step-plus-function limitations and, consequently, in requiring the use of a single wedge-like device or its equivalent to secure the cutting tool in the tool holder. Federal Broach agrees that the “locking” limitations should not have been construed as step-plus-function limitations but argues that the district court’s construction of those limitations is correct nonetheless because the specification requires the use of a single retaining device to secure the cutting tool in the tool holder.

We first address the applicability of 35 U.S.C. § 112, ¶ 6 to the “locking” limitations of claims 1 and 3. That statute governs the construction of combination claims drafted in means- or step-plus-function format and provides as follows:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, materials, or acts, described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6 (2000). In the context of method claims, use of the term “step for” signals the patentee’s intent to invoke § 112, ¶ 6 and thus gives rise to the presumption that the “step for” limitations are in step-plus-function format. Masco Corp. v. United States, 303 F.3d 1316, 1326 (Fed. Cir. 2002). Without “step for” language, however, a method claim is subject to the strictures of § 112, ¶ 6 only if it recites steps for performing a specified function but does not recite any act in support of that function. See O.I. Corp. v. Tekmar Co., 115 F.3d 1576, 1583 (Fed. Cir. 1997).

In the present case, we agree with both parties that the district court erred in interpreting the “locking” limitations under § 112, ¶ 6. To begin with, those limitations use the phrase “step of”—rather than the phrase “step for”—and therefore do not invoke the presumption that they are in step-plus-function format. See Masco Corp., 303 F.3d at 1327. Furthermore, the “locking” limitations are not step-plus-function limitations because they do not contain steps plus functions without acts. Although

claim 1 specifies that the “locking” step performs the function of securing the cutting tool in the tool holder, it also explains how the tool is secured in the holder—by imposing a locking force on the tool’s third planar abutment surface. The “locking” limitation of claim 1 thus contains an act in support of its specified function and, consequently, does not implicate § 112, ¶ 6. The “locking” limitation of claim 3 is even farther removed from being in step-plus-function format: it does not expressly specify the function that the “locking” step is to perform, and it recites the act of imposing a locking force on a portion of the tool’s third planar surface. We therefore conclude that the “locking” limitations of claims 1 and 3 are not step-plus-function limitations and that, as such, they should not be construed to cover only corresponding acts described in the specification and equivalents thereof.

Having determined that the “locking” limitations are not subject to the constraints imposed by § 112, ¶ 6, we next consider whether they nonetheless require, as Federal Broach urges, the use of a single retaining device to secure the cutting tool in the tool holder. Although the claim language does not identify any particular structure for imposing the locking force, the specification expresses the patentee’s clear intent to limit the claims to the use of a single retaining device for securing the cutting tool in the tool holder. The “Summary of the Invention” portion of the specification refers to “a securing device” in the singular, ’857 patent, col. 2, l. 26, and further provides that one object of the invention is to provide a cutting tool retention device “that requires only a single retaining device in an effort to reduce the time and effort required to change tools,” *id.*, col. 3, ll. 4-7. More importantly, the specification distinguishes over the prior art—which required a plurality of socket head screws in addition to a radial positioning device—on the basis that the invention claimed in the ’857 patent requires only one retaining device to hold the cutting tool in place. *Id.*, col. 6, ll. 59-62. It goes on to explain that, by reducing the number of parts necessary to secure the cutting tool to a single device, the claimed invention greatly reduces the time and effort required to change tools. *Id.*, col. 6, ll. 62-65. The specification makes clear, however, that the “single retaining device” need not consist of only a single component. On the contrary, it describes the preferred embodiment’s “wedge lock arrangement”—which includes a wedge member, a threaded collar, a cross pin, and a retaining screw—as “one retaining device.” *Id.*, col. 5, l. 54 to col. 6, l. 24; *id.*, col. 6, ll. 59-65. We therefore conclude that, consistent with

the specification, the “locking” steps of claims 1 and 3 require the use of a single retaining arrangement to secure the cutting tool in the tool holder.

We do not agree with the district court, however, that the single retaining arrangement must include a wedge-like device. As noted above, claims 1 and 3 do not identify any particular structure for securing the cutting tool in the tool holder. And although the specification repeatedly discloses the use of a wedge for performing that function, e.g., *id.*, col. 4, l. 59; *id.*, col. 5, l. 54 to col. 6, l. 35; *id.*, col. 6, l. 64, it does so in the context of describing two embodiments and even acknowledges that a wedge is only one example of a securing device, *see id.*, col. 2, ll. 26-27 (referring to “a securing device, such as a wedge”). Moreover, the dependent claims contemplate the use of a structure other than a wedge-like device. Claim 5, which depends from claim 3, recites the use of a threaded member to impose a locking force between the cutting tool and the tool holder. Claim 7, which also depends from claim 3, separately recites the use of a wedging member to perform that function. At the very least then, claim 3 should be construed to encompass the structures recited in the claims that depend from it, and we see no reason not to interpret claim 1 in a similar manner. We therefore conclude that the “locking” steps of claims 1 and 3 do not require the use of a wedge-like device.

### CONCLUSION

We hold that the district court erred in interpreting claims 1 and 3 of the '857 patent to require that the recited tool holder be a single, one-piece structure. In addition, we modify the court's construction of the term “predetermined accurate work position,” and we reverse the court's construction of the “locking” limitations under § 112, ¶ 6. Accordingly, we vacate the judgment of noninfringement and remand for further proceedings consistent with this opinion.

MAYER, Chief Judge, dissents.

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[1] Federal Broach additionally argues that Utica's litigation position regarding construction of the term “predetermined accurate work position” compels us to interpret claims 1 and 3 to require the use of a one-piece tool holder. We reject that argument and instead base our construction of the claims on the claim language, the specification, and (to the extent that it is relevant) the prosecution history.