

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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(Serial No. 11/014,909)

**IN RE RICHARD F. SCHWEMBERGER**

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2010-1127

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Appeal from the United States Patent and Trademark  
Office, Board of Patent Appeals and Interferences.

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Decided: October 13, 2010

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HOWARD N. FLAXMAN, Welsh & Flaxman LLC, of Alexandria, Virginia, for appellant.

RAYMOND T. CHEN, Solicitor, Office of the Solicitor, United States Patent and Trademark Office, of Alexandria, Virginia, for the Director of the United States Patent and Trademark Office. With him on the brief were SYDNEY O. JOHNSON, JR. and FRANCES N. LYNCH, Associate Solicitors.

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Before BRYSON, DYK, and MOORE, *Circuit Judges*.

PER CURIAM.

Richard T. Schwemberger appeals from a final decision of the United States Patent and Trademark Office, Board of Patent Appeals and Interferences (Board), which found claims 1-30 of Application Serial No. 11/014,909 (the '909 application) unpatentable as obvious. *See Ex parte Schwemberger*, No. 2009-1229 (B.P.A.I. Aug. 12, 2009) (Initial Decision); *see also Ex parte Schwemberger*, No. 2009-1229 (B.P.A.I. Sept. 18, 2009) (Final Decision). For the following reasons, we *affirm*.

#### BACKGROUND

Mr. Schwemberger is one of the named inventors of the '909 application, which is entitled "Curved Cutter Stapler with Aligned Tissue Retention Feature." The '909 application is directed to a surgical stapling instrument that applies staples to body tissue. The stapling instrument of the '909 application includes a support frame with a handle at one end and an "end effector" at the other. The end effector supports an anvil and a cartridge housing that carries a plurality of staples. The anvil and cartridge housing are moveable relative to each other, such that tissue can be clamped between the two, and a "tissue retention feature" maintains the tissue within the end effector during a procedure. Once the tissue is in place, a firing mechanism is used to drive staples from the cartridge into contact with the anvil, thus suturing the tissue together. Figure 1 illustrates a preferred embodiment of the stapling instrument disclosed by the '909 application:

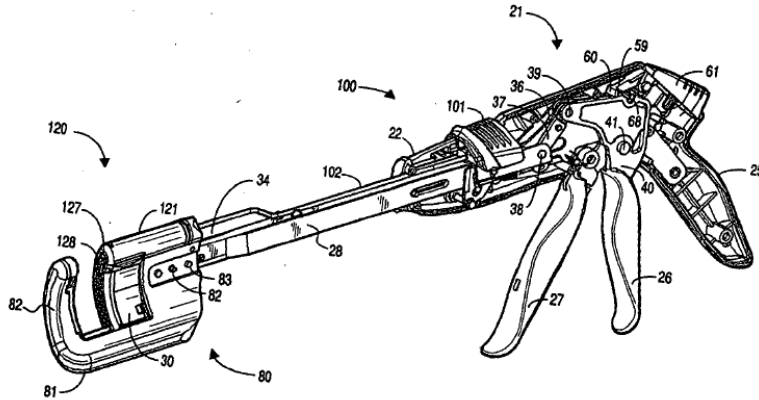
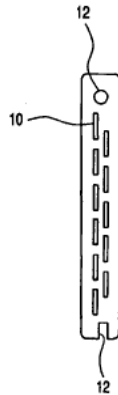


FIG. 1

The '909 application discloses that prior art surgical stapling instruments used tissue retention features (such as retaining pins and cartridge guides) that were located outside the rows of staple lines on a cartridge. For example, Figure 41 of the '909 application illustrates a prior art staple line configuration in which the tissue retention features 12 are located outside the staple lines 10:

FIG. 41  
(Prior Art)

This configuration creates a gap between the end of the staple line and the tissue retention feature where the tissue is not sutured closed. The '909 application states that this may contribute to problems such as bleeding or leakage of fluids out of the cut tissue. Thus, the '909 application discloses that it would be desirable to eliminate the gaps between the tissue retention devices and staple lines by extending the staple lines beyond the tissue retention features.

Claim 9, which is representative of the appealed claims, reads as follows:

9. A surgical instrument adapted for applying a plurality of surgical fasteners to body tissue, the surgical instrument comprising:

a frame having a proximal end and a distal end, with a handle positioned at the proximal end and an end effector positioned at the distal end;

the end effector being shaped and dimensioned for supporting a cartridge housing and an anvil, the cartridge housing and anvil structure being relatively movable between a first spaced apart position and a second position in close approximation with one another;

a firing mechanism associated with the end effector and the cartridge housing for selective and substantially simultaneous actuation of the fastening elements; and

a tissue retention feature associated with the cartridge housing and anvil, the tissue retention feature maintaining tissue within the end effector during treatment and including

a top tissue retention member extending between the cartridge housing and the an-

vil, wherein the top tissue retention member is capable of selective distal movement or proximal retraction, and

*a bottom tissue retention member extending between the cartridge housing and the anvil;*

the cartridge housing includes at least one staple line along a face of the cartridge housing defining the longitudinal extent of the surgical fasteners being applied, the staple line includes a top and a bottom; and

*the top of the staple line is above the top tissue retention member or the bottom of the staple line is below the bottom tissue retention member.*

*Initial Decision*, slip op. at 2-3 (emphases added).

The examiner rejected claims 1-30 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 4,930,503 (Pruitt) in view of U.S. Patent No. 5,673,841 (Schulze). Pruitt discloses a surgical stapler with a proximal end that includes handle 15 and a distal end that includes anvil 17 and cartridge holder 20. Cartridge holder 20 supports staple cartridge 19. Pruitt col.6 ll.21-27. Figures 8 and 12 of Pruitt depict frontal views of the disclosed stapler and anvil, respectively:

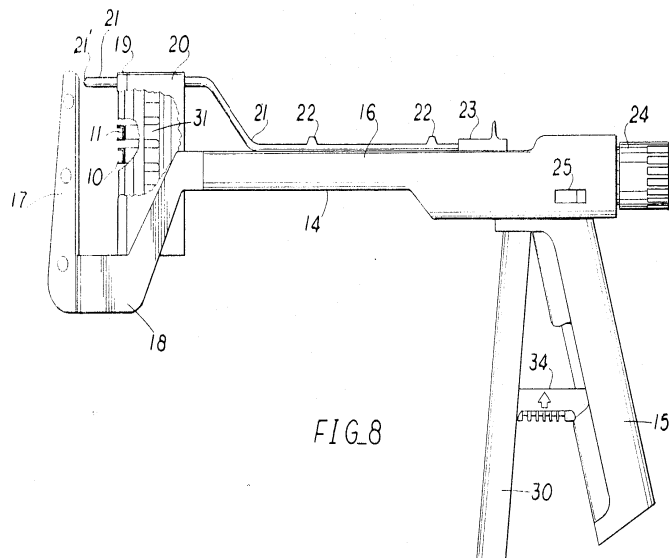


FIG. 8

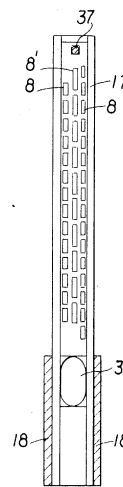
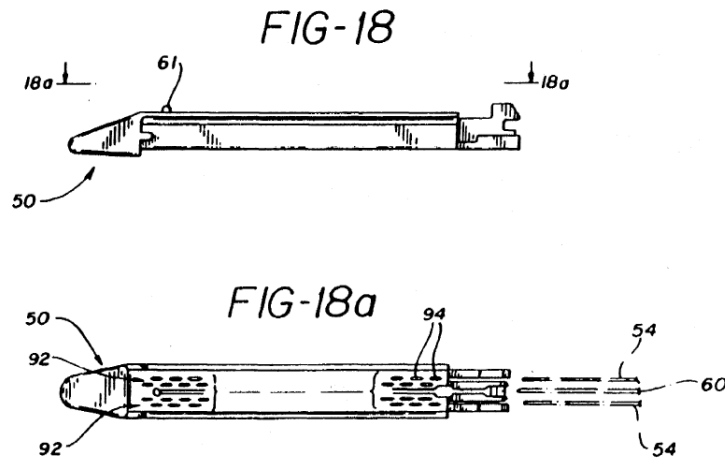


FIG. 12

Staple cartridge 19 can be advanced and retracted with respect to anvil 17 using knob 24. *Id.* col.6 ll.35-42. Guide bar 38, which is fixed between anvil 17 and cartridge holder 20 inside arm 18, ensures that the cartridge and anvil remain correctly positioned relative to each other. *Id.* col.7 ll.37-39, 49-51. Pruitt's stapler also includes positioning rod 21, which is moveable between staple cartridge 19 and anvil 17. *Id.* col.6 ll.29-34. When the anvil and cartridge are positioned against the tissue to be stapled, rod 21 can be advanced to pierce the tissue and hold the tissue in position during the stapling procedure. *Id.* col.6 ll.48-53. The closing of trigger 30 actuates a plunger mechanism that forces staples 10 out of cartridge 19 into the grooves of anvil 17. *Id.* col.6 ll.54-58.

The examiner found that Pruitt discloses all limitations of claim 9 except for the final limitation, which recites that "the top of the staple line is above the top tissue retention member or the bottom of the staple line is

below the bottom tissue retention member.” However, the examiner found that Figure 18a of Schulze teaches this limitation. Schulze discloses a surgical stapling and cutting instrument. Figures 18 and 18a, reproduced below, depict the top and side views of a staple cartridge used in Schulze’s instrument:



As shown in Figure 18a, the staple lines 92 of Schulze’s cartridge extend beyond pin 61. The examiner found that it would have been obvious to one of ordinary skill in the art at the time of the invention of the '909 application to modify the staple lines of Pruitt according to the design of Schulze “for the purpose of ensuring complete closure of the tissue.” J.A. 243.

Mr. Schwemberger appealed to the Board, which affirmed the examiner’s rejection. The Board found that Pruitt discloses all of the limitations of claim 9 except the final limitation. With respect to the limitation of a “bottom tissue retention member extending between the cartridge housing and the anvil,” the Board noted that the specification did not provide any definition of the term “bottom tissue retention member.” The Board concluded that the ordinary meaning of the term applied and that

this ordinary meaning was broad enough to cover “a bottom member [that] retains tissue.” *Initial Decision*, slip op. at 9. The Board observed that Pruitt’s guide bar 38 retains tissue and is located below positioning rod 21 (which the Board found satisfied the claimed “top tissue retention member”). *Id.* at 6, 9. Therefore, the Board found that guide bar 38 satisfied the “bottom tissue retention member” limitation. *Id.* at 9.

The Board also determined that it would have been obvious to modify Pruitt’s stapling instrument by incorporating the staple line configuration disclosed by Schulze. The Board noted that Schulze’s gap spacing pin 61 was a “similar device” to Pruitt’s positioning rod 21: Schulze’s pin and Pruitt’s rod both functioned to maintain the anvil in a position parallel to the staple cartridge during stapling and, in doing so, both components penetrated the tissue trapped between the anvil and the cartridge. *Id.* Because Schulze’s pin and Pruitt’s rod were functionally and structurally similar, the Board found that “it would have been obvious to improve Pruitt’s positioning rod 21 in the same manner that Schulze improved the stapler of Schulze’s Figures 18 and 18a, namely, by moving the positioning rod 21 down below the top of the lines of staples 6, 7 and by moving Pruitt’s guide bar 38 above the bottom of the line of staples.” *Id.* at 10. Mr. Schwemberger filed a request for rehearing, and the Board denied the request.

Mr. Schwemberger timely appealed, and we have jurisdiction under 28 U.S.C. § 1295(a)(4)(A) and 35 U.S.C. § 141.

#### DISCUSSION

We review the Board’s legal conclusions without deference and its findings of fact for substantial evidence. *See In re Gartside*, 203 F.3d 1305, 1315-16 (Fed. Cir.



2000) Claims are given their "broadest reasonable interpretation" during prosecution, and we review the Board's interpretation of disputed claim language to determine whether it is reasonable in light of the specification. *See In re Morris*, 127 F.3d 1048, 1055 (Fed. Cir. 1997). Whether an invention would have been obvious is a legal question based on underlying findings of fact, including (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Gartside*, 203 F.3d at 1319.

Mr. Schwemberger first asserts that the Board erred by construing "bottom tissue retention feature" to read on Pruitt's guide bar 38, arguing that the inventors of the '909 application acted as their own lexicographer with respect to the term. It is true that a "claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history." *CCS Fitness v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). However, Mr. Schwemberger points to no clear definition of the term "bottom tissue retention member" in the specification, and we are unable to discern one. Given that the specification sets forth no clear definition of the disputed claim term, the Board correctly determined that the term should be given its broadest reasonable interpretation. *See 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."). The Board's interpretation of "bottom tissue retention member" as having its ordinary meaning—that is, a bottom member that retains tissue—is not unreasonable.

Under this interpretation, substantial evidence supports the Board's finding that Pruitt's guide bar 38 meets

the “bottom tissue retention member” limitation. Figures 8 and 12 of Pruitt depict guide bar 38 as being located below positioning rod 21, and Mr. Schwemberger does not dispute that rod 21 meets the “top tissue retention member” limitation. Further, Pruitt’s figures show that the guide bar 38 defines the lower boundary of the channel between the anvil and the cartridge. In this sense, guide bar 38 necessarily operates to retain tissue within the channel. Mr. Schwemberger argues that Pruitt’s guide bar 38 cannot be a “tissue retention” member because it does not come into contact with any tissue. However, Pruitt does not teach that guide bar 38 cannot come into contact with tissue; to the contrary, Figure 12 appears to depict the top of guide bar 38 as being exposed, making actual contact with tissue possible. More fundamentally, claim 9 requires only retention of tissue, not actual contact, and substantial evidence supports the Board’s finding that guide bar 38 functions to retain tissue by defining a lower limit of the channel between the anvil and cartridge.

Next, Mr. Schwemberger claims that the Board improperly found that Schulze’s gap spacing pin 61 meets the limitation of “a top tissue retention member extending between the cartridge housing and the anvil, wherein the top tissue retention member is capable of selective distal movement or proximal retraction.” Mr. Schwemberger argues, correctly, that Schulze does not disclose that the gap spacing pin is capable of “distal movement or proximal retraction.” Therefore, Mr. Schwemberger is correct that the gap spacing pin does not meet the “top tissue retention member” limitation. However, the Board did not find that it did. To the contrary, the Board found only that Schulze’s pin “acts as a tissue retention feature in th[e] sense that the action of the gap spacing pin 61 retains the tissue between the anvil portion 40 and the

cartridge assembly 50.” *Initial Decision*, slip op. at 7 (emphasis added). The Board found that Pruitt’s positioning rod 21 meets the “top tissue retention member” limitation, and Mr. Schwemberger does not dispute this finding.

Finally, Mr. Schwemberger argues that the Board failed to articulate an appropriate rationale for combining Schulze’s staple line configuration with the surgical stapler of Pruitt. Mr. Schwemberger asserts that the examiner’s motivation for combining Schulze and Pruitt, which the Board sustained—to “ensur[e] complete closure of the tissue”—does not come from either Pruitt or Schulze, but from the ’909 application itself. Therefore, he contends, the rationale is based on improper hindsight.

The Supreme Court has cautioned that although it may be valuable to identify a particular reason to combine two references, the obviousness analysis is not limited to this inquiry. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-19 (2007). Rather, “[i]f a person of ordinary skill can implement a predictable variation [of a work], § 103 likely bars its patentability.” *Id.* at 417. Similarly, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* In evaluating obviousness, therefore, “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.*

The specification of the ’909 application discloses a known problem associated with surgical stapling procedures: when a section of cut tissue is not sutured fully closed, problems such as bleeding and leakage of fluids may arise. The apparent solution to this known problem

is to extend the sutures to a point beyond the cut section of tissue, thus ensuring that the tissue is fully closed. The particular manner in which the inventors of the '909 application chose to implement this solution—by extending the lines of staples beyond the “tissue retention members” that mark the boundaries of the cut portion of tissue—is plainly disclosed by Schulze’s Figure 18a. Thus, and particularly in view of the similarities between the surgical instruments of Pruitt and Schulze, modifying Pruitt’s staple line configuration in accordance with the configuration disclosed by Schulze is no more than “the combination of familiar elements according to known methods . . . [with] predictable results.” *See KSR*, 550 U.S. at 416; *see also id.* at 421 (“When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.”). Therefore, the Board correctly determined that claim 9 is obvious over the combination of Pruitt and Schulze.

Mr. Schwemberger argues that a person of skill in the art would not have had a reasonable expectation of success in combining Pruitt’s surgical stapler with Schulze’s staple line configuration. Mr. Schwemberger asserts that there is no physical space above or below Pruitt’s rod 21 and guide bar 38 to allow a complete staple to form; therefore, Mr. Schwemberger contends, the proposed combination would have resulted in an inoperable instrument. However, the Board found that a person of ordinary skill in the relevant art would have known how to move rod 21 below the top of the staple line or to move bar 38 above the bottom of the staple line. *Initial Decision*, slip op. at 10. Mr. Schwemberger points to no contrary evidence showing that this relatively minor design change would be outside the scope of ordinary skill.

Because the Board did not err in determining that claim 9 is obvious in view of Pruitt over Schulze, we affirm the Board's decision rejecting claims 1-30 under 35 U.S.C. § 103(a).

**AFFIRMED**

COSTS

No costs.