

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* W. MICHAEL SHERRILL

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Appeal 2008-5336  
Application 10/219,438  
Technology Center 1700

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Decided: September 29,2008

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Before ROMULO H. DELMENDO, LINDA M. GAUDETTE, and  
KAREN M. HASTINGS, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1-18 (Appeal Brief filed February 11, 2008, hereinafter “Br.”; Final Office Action mailed July 10, 2007). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Appellant states that the “invention is directed to a method which is particularly useful for forming a clay which has been thrown, or is spinning, as commonly done when forming pots and the like” (Specification, hereinafter “Spec.,” ¶0002).

Claims 1, 2, 9, and 10 on appeal read as follows:

1. A method for forming objects from clay comprising the steps of:

a) throwing said clay to form a preliminary object;

b) contacting said clay with a rib wherein said rib comprises:

at least one edge comprising an irregular curved shape and a central region; and wherein said rib comprises a curved taper cross-sectional region between said central region and said irregular curved edge; and

c) imparting said irregular curved shape into said preliminary object to form a secondary object.

2. The method of claim 1 wherein said rib further comprises a centrally located hole located within said central region.

9. The method of claim 1 wherein said curved taper region comprises a first curved taper section and a second curved taper cross-sectional section exterior to said first curved taper section.

10. The method of claim 1 wherein said rib comprises a polymer with a stiffness of at least 30 D to no more than 80 D.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Simpson	4,102,622	Jul. 25, 1978
Koulouras	4,455,752	Jun. 26, 1984
Dreith	5,942,261	Aug. 24, 1999

The Examiner rejected the claims under 35 U.S.C. § 103(a) as follows: (i) claims 1, 9, and 13 as unpatentable over the combined teachings of Simpson and Dreith; and (ii) claims 2-8, 10-12, and 14-18 as unpatentable over the combined teachings of Simpson, Dreith, and Koulouras (Examiner's Answer mailed April 16, 2008, hereinafter "Ans.," 4-9).

### ISSUE

Has Appellant demonstrated error in the Examiner's determination that a person having ordinary skill in the art would have found the subject matter of the appealed claims obvious in view of the applied prior art?

### FINDINGS OF FACT

1. Appellant's Figure 2 is reproduced below:

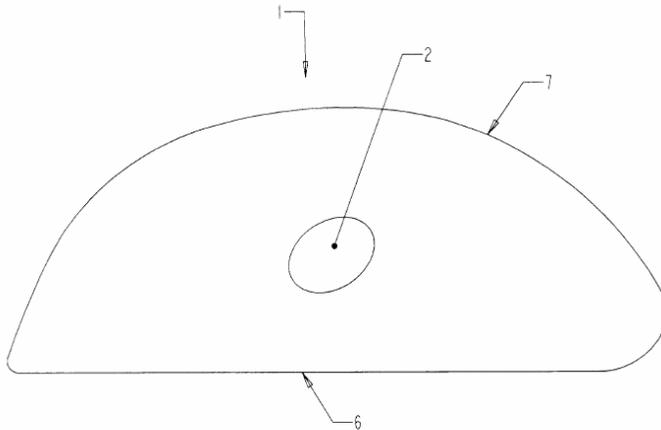
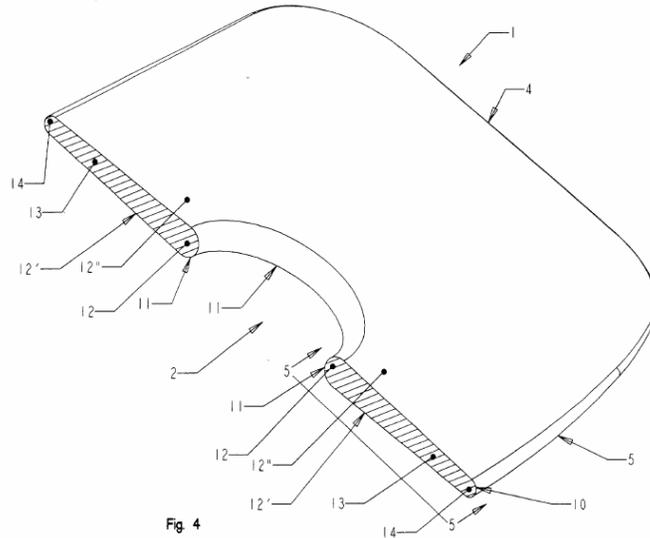


Fig. 2

2. Appellant's Figure 2 is said to depict an embodiment of a clay tool 1 having a single straight edge 6, an irregular curved edge 7, and centrally located hole 2 (¶¶0019-0023).
3. Appellant's Specification defines the term "curved taper" as follows (¶0025):

For the purposes of the present invention the term "curved taper" refers to a taper which has a continuously decreasing radius of curvature from the thickest end to the thinnest end such that at any given point along the curved taper the thickness is no less than the thickness that would be expected for a linear taper. A linear taper is one in which the upper and lower surface of a taper are both planar from the thickest end of the taper to the thinnest end of the taper.

4. Appellant's Figure 4 is reproduced below:



5. Appellant's Figure 4 is said to depict a cross-cut perspective view of a clay tool in accordance with the present invention, wherein the "[m]ore preferably the curved taper region comprise[s] a first curved taper section, 13, and exterior thereto a second curved taper section, 14" (¶0023).

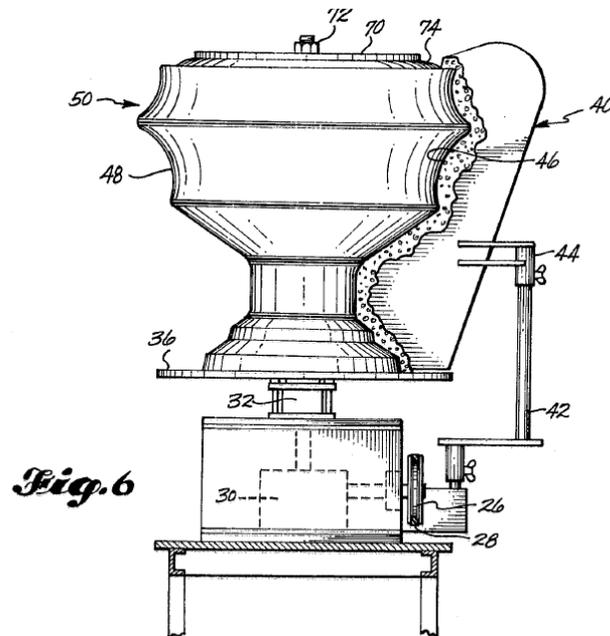
6. Appellant's Specification acknowledges (¶0003):

The art of forming pots from clay has been known for many centuries. One well known technique is to place moldable clay onto a spinning wheel and shaping the spinning clay into an object which has aesthetic appeal or a practical application.

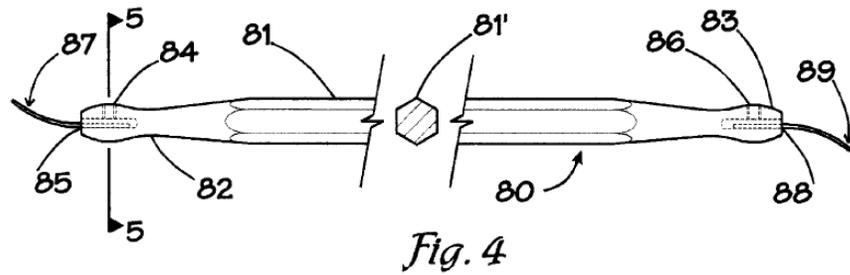
7. Simpson teaches (col. 1, ll. 5-9):

Small vases used as a planter are often made by forming clay on a potters wheel and kiln drying the formed vase to make a planter. These planters can be formed into a variable contour, but have the disadvantage of usually being limited in size and are easily broken.

8. Simpson's Figure 6 is reproduced below:



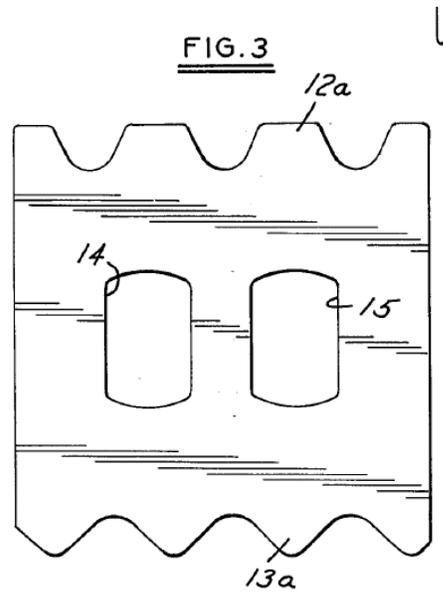
9. Simpson's Figure 6 depicts shaping a planter 50 with a shaper tool 40 having a contoured edge 46, which determines the outside contour of planter 50 (col. 2, ll. 31-32; col. 2, l. 48 to col. 3, l. 4).
10. Dreith teaches "modeling tools with wire-ends for cutting, carving/scraping, shaping/modeling, molding, and texturing a variety of soft materials (such as wax, soft clay, and plaster before they are hardened or fired into a final product such as sculptures, pottery, dishware, tiles, beads, walls, etc.)" (col. 1, ll. 8-13).
11. Dreith further states that "hobby and professional artists. . . . find themselves with a great need for many different sculpting tools having different cross-sections, shapes, sizes, and stiffness" (col. 1, ll. 56-59).
12. Dreith's Figure 4 is reproduced below:



13. Dreith's Figure 4 is said to depict a sectional view of a preferred tool of the invention with a sectional view of the handle (col. 3, ll. 33-35).
14. Dreith teaches that the handle of the tool of Figure 4 may have a cross-sectional shape other than a hexagonal one as shown, such as a moon-shaped cross-section, and that "[t]he outer dimension of tool handles may vary along its length to make it more ergonomic for artists" (col. 5, ll. 17-23).
15. The Examiner provided a partial illustration of Dreith's tool having a moon-shaped cross-section (Ans. 8):



16. The Examiner's illustration is said to depict Dreith's tool having a moon-shaped cross-section.
17. Koulouras' Figure 3 is reproduced below:



18. Koulouras' Figure 3 is said to depict a sand toy (i.e., a tool for shaping sand) made of plastic with a uniform thickness, wherein openings 14 and 15 provide means for grasping the tool with two hands (col. 2, ll. 7-40).
19. Dreith teaches that the wire end of the tool (i.e., the end of the tool that contacts the product to be shaped) is "made of many different suitable materials of varying stiffness" (col. 3, ll. 9-13).

### PRINCIPLES OF LAW

On appeal to this Board, Appellant must show that the Examiner erred in finally rejecting the claims. *Cf. In re Kahn*, 441 F.3d 977, 985-986 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of

nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)); *see also* 37 C.F.R. § 41.37(c)(1)(vii).

It is well settled that the United States Patent and Trademark Office (PTO) is obligated to give claim terms their broadest reasonable interpretation, taking into account any enlightenment by way of definitions or otherwise found in the specification. *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification . . . . Therefore, we look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation.”); *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (“[T]he PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution.”).

This longstanding principle is based on the notion that “during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.” *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989). That is, a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. “Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.” *In re Zletz*, 893 F.2d at 322.

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’ ” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1734 (2007).

*KSR* reaffirms the analytical framework set out in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which states that an objective obviousness analysis includes: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art. *KSR*, 127 S. Ct. at 1734. Secondary considerations such as commercial success, long felt but unsolved needs, or failure of others “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Id.* (quoting *Graham*, 383 U.S. at 17-18).

*KSR* disapproved a rigid approach to obviousness (*i.e.*, an analysis limited to lack of teaching, suggestion, or motivation). *KSR*, 127 S. Ct. at 1741 (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”). See also *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but requires, consideration of common knowledge and common sense”); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006) (“There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires an actual teaching to combine...”).

*KSR* further instructs “that when a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 127 S. Ct. at 1740.

“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.” *In re Boesch*, 617 F.2d 272, 276 (CCPA 1980).

#### ANALYSIS

As to the rejection of claims 1, 9, and 13 over Simpson and Dreith, Appellant has submitted reasonably specific arguments for claims 1 and 9. Accordingly, for this rejection, we address claims 1 and 9 separately but claim 13 stands or falls with claim 1. As to the rejection of claims 2-8, 10-12, and 14-18 over Simpson, Dreith, and Koulouras, Appellant has grouped and argued claims 2-5 separately from claims 10-12. Accordingly, we select and confine our discussion of this rejection to claims 2 and 10. Claims 3-8, 11, 12, and 14-18 stand or fall with either claim 2 or claim 10. *See* 37 C.F.R. § 41.37(c)(1)(vii).

#### CLAIM 1 (Simpson and Dreith):

Appellant has “no quarrel” with the Examiner’s factual finding that Simpson describes a method substantially as claimed herein, wherein a shaper tool 40 having an irregular shaped edge is used to form a planter (Br. 6; Facts 1, 2, and 6-9). Rather, Appellant’s principal contention is that

neither Simpson nor Dreith teaches “a curved taper cross-sectional region” in the shaper tool as required by claim 1 (Br. 5-7).

We cannot agree with Appellant. As pointed out by the Examiner (Facts 10-16), and as acknowledged by Appellant (Br. 7), Dreith teaches a shaping tool that may be provided with various cross-sections, including a moon-shaped cross-section (i.e., a cross-section defined by overlaid circles). According to Dreith, artists and sculptors have a need for tools with varying cross-sections and dimensions (Facts 11 and 14).

Under these circumstances, a person having ordinary skill in the art would have been led to use a hand-held shaping tool having a moon-shaped cross-section as taught by Dreith in Simpson’s method in order to better control the shaping of the planter while realizing the ergonomic advantages associated with such a cross-section. The provision of an irregular curved shape edge on the shaping tool, as shown in Simpson’s tool, would also have been prima facie obvious because such an irregular curved shape edge would have enabled an irregular curved shape contour on the final product. While Appellant appears to be arguing that a moon-shaped cross-section would not have “a curved taper cross-sectional region” as required by claim 1, this argument fails because a moon-shaped cross-section does in fact have a “curved taper” as that term is defined in Appellant’s own Specification (Fact 3). *KSR*, 127 S. Ct. at 1740 (“[W]hen a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”).

CLAIM 9 (Simpson and Dreith):

Appellant argues that Simpson does not teach a curved taper cross-sectional region, much less a curved taper cross-sectional region having first and second curved taper sections (Br. 7).

Appellant's argument does not demonstrate reversible error. A shaping tool with a moon-shaped cross-section of the type shown in Dreith necessarily has a first curved taper section and a second curved taper section exterior to the first curved taper section, as recited in claim 9, because any two parts of the moon-shaped cross-section may be considered as first and second curved taper sections. This interpretation is consistent with Appellant's own Specification, which indicates that the first and second curved taper sections merely define two sections of the curved taper cross-sectional region (Facts 4, 5). *In re Icon Health*, 496 F.3d at 1379 (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification . . .”).

CLAIM 2 (Simpson, Dreith, and Koulouras):

Appellant urges that Koulouras teaches away from the claimed invention because it teaches a body having a uniform thickness and that “[e]ven though Koulouras teaches a central hole the deficiencies of Simpson as modified by Dreith. . . . are not mitigated” (Br. 8-9; Facts 17, 18).

We disagree. That Koulouras teaches a device with uniform thickness is not particularly helpful to the obviousness inquiry because the Examiner has not relied on Koulouras for the curved taper cross-section. As discussed above, the Examiner has relied on Dreith for the curved taper cross-section. “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in

any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”). *In re Keller*, 642 F.2d at 425 (“[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art.”).

CLAIM 10 (Simpson, Dreith, and Koulouras):

Appellant argues that Simpson and Koulouras both teach “a rigid rib in direct contradiction to the claimed subject matter” (Br. 9).

Appellant’s argument is unpersuasive. A person having ordinary skill in the art would have understood from common sense that the edge of a tool that contacts the clay during shaping must have a suitable degree of stiffness. This finding is supported by Dreith’s disclosure, which suggests that the stiffness of the part that contacts the material to be molded is a result-effective variable (Fact 19). Hence, we conclude that a person having ordinary skill in the art would have found it obvious to arrive at the claimed stiffness values by routine optimization of a result-effective variable. *In re Boesch*, 617 F.2d at 276.

For these reasons, we uphold the Examiner’s rejections.

## CONCLUSION

On this record, we determine that Appellant has failed to demonstrate any error in the Examiner’s determination that (i) claims 1, 9, and 13 are unpatentable over the combined teachings of Simpson and Dreith and (ii) claims 2-8, 10-12, and 14-18 are unpatentable over the combined teachings of Simpson, Dreith, and Koulouras.

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DECISION

The Examiner's decision to reject appealed claims 1-18 is affirmed.

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).

AFFIRMED

PL Initial:  
sld

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