

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES C. BRIDGES, JR. and CHARLES P. HOFFNER, JR.

Appeal 2008-4357
Application 09/797,067
Technology Center 3600

Decided: November 25, 2008

Before HUBERT C. LORIN, ANTON W. FETTING, and
DAVID B. WALKER, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

James C. Bridges, Jr., et al. (Appellants) seek our review under
35 U.S.C. § 134 of the final rejection of claims 1-9, 11-20, 22-31, 33-41
and 43. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.¹

THE INVENTION

The invention is a method for providing a purchaser with a simulated view of various floor covering styles, designs, colors and patterns in a digital image of an actual environment. (Specification 2:20-3:1.)

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method of providing a prospective purchaser of floor covering products with simulated preview images of preselected floor covering products within a proposed area of installation, the method comprising the steps of:
 - obtaining a listing including at least one floor covering product of interest to the prospective purchaser wherein such floor covering product is designated in the listing by a pre-established product identifier recognizable to the manufacturer of the floor covering product;
 - obtaining a digital image of a proposed area of installation for the floor covering product wherein the digital image includes non-floor covering elements;
 - manipulating the digital image to remove non-floor covering elements such that a resulting manipulation surface corresponding to the visible

¹ Our decision will make reference to the Appellants' Appeal Brief ("Br.," filed June 4, 2007) and the Examiner's Answer ("Answer," mailed August 3, 2007).

surface area to be covered by the floor covering within the proposed area of installation is obtained;
selecting at least one shadow sub-region of the manipulation surface which is visible and covered by at least one shadow;
importing a digitized pattern simulating the floor covering product of interest into the digital image in registry over the manipulation surface;
inserting the at least one shadow sub-region of the manipulated surface into the digitized pattern in registration with the manipulation surface;
reinserting at least a portion of the removed non-floor covering elements in a positional orientation corresponding to the positional orientation prior to removal to yield a simulated preview image of the area to be covered which includes the floor covering product of interest, at least one shadow, and non-floor covering elements; and
communicating the simulated preview image back to the prospective purchaser.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Whitworth	US 2001/0034668	Oct. 25, 2001
Carlin	US 2002/0093538 A1	Jul. 18, 2002

The following rejection is before us for review:

1. Claims 1-9, 11-20, 22-31, 33-41 and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Whitworth in view of Carlin.

ISSUES

The issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 1-9, 11-20, 22-31, 33-41 and 43 under 35 U.S.C. § 103(a). The issue turns on whether the combination of Whitworth and Carlin discloses the steps of selecting a shadow sub-region and inserting the shadow sub-region into a digitized pattern and whether the combination of the prior art would have led one of ordinary skill in the art to the claimed invention.

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

Claim Construction

1. Claim 1 calls for “selecting at least one shadow sub-region of the manipulation surface which is visible and covered by at least one shadow.”
2. Claim 1 calls for “inserting the at least one shadow sub-region of the manipulated surface into the digitized pattern in registration with the manipulation surface.”
3. The specification does not provide an express definition of “selecting.”
4. The ordinary and customary meaning of “select” is “to choose (as by fitness or excellence) from a number or group: pick out.” (*See*

Merriam-Webster's Collegiate Dictionary 1059 (10th Ed. 1993,) (Entry for "select"; v.).

5. The specification does not recite an express definition of "sub-region."
6. The ordinary and customary meaning of "sub-region" is "a subdivision of a region." (*See Merriam-Webster's Collegiate Dictionary* 1173 (10th Ed. 1993,) (Entry 1. for "subregion"; n.).
7. Claim 1 does not expressly or implicitly recite temporal conditions for the "selecting" or "inserting" step.

Obviousness

The scope and content of the prior art

8. Whitworth relates to the problem of allowing potential buyers to view items where they might be used prior to purchasing. (Whitworth 0002.)
9. Whitworth relates to a method for simulating the look of new carpet using a current image of a room. (Whitworth 0028.)
10. In paragraphs 0103-0119, Whitworth describes a method of simulating the look of a carpet in an image of a room where it might be used.
11. Whitworth uses information on the lighting conditions under which the room image was photographed. (Whitworth 0109, 0066 and 0073.)
12. Carlin relates to the creation of realistic images of objects for sale placed in a viewer's own home. (Carlin 0003-0004.)

13. Carlin provides realistic scene illumination using ray tracing. (Carlin 0169 and 0174.)
14. Appellants admit that light ray tracing software models the predicted path of the light rays through a digital room filled with digital objects to create a lighted digital room. (Br. 8-9.)
15. Specifying room lighting parameters permits the rendered image to project similar lighting and shadows on virtual objects. (Carlin 0251.)
16. Photorealistic images induce a person to buy an object by seeing it in-situ and minimize unprofitable returns. (Carlin 0062.)

Any differences between the claimed subject matter and the prior art

17. The claimed invention calls for “selecting at least one shadow sub-region of the manipulation surface which is visible and covered by at least one shadow” which the prior art does not explicitly describe or disclose.

The level of skill in the art

18. Neither the Examiner nor the Appellants have addressed the level of ordinary skill in the pertinent art of digital image manipulation. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (quoting *Litton*

Indus. Prods., Inc. v. Solid State Sys. Corp., 755 F.2d 158, 163
(Fed. Cir. 1985).

Secondary considerations

19. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, a pending claim is given the broadest reasonable construction consistent with the specification and should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

[W]e look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation. As this court has discussed, this methodology produces claims with only justifiable breadth. *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984). Further, as applicants may amend claims to narrow their scope, a broad construction during prosecution creates no unfairness to the applicant or patentee. *Am. Acad.*, 367 F.3d at 1364.

In re ICON Health and Fitness, Inc., 496 F.3d 1374, 1379 (Fed. Cir. 2007).

Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003).

Obviousness

“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). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) The Court in *Graham* further noted that evidence of secondary considerations “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” 383 U.S. at 17-18.

ANALYSIS

Claims 1-9 and 11

The Appellants argued claims 1-9 and 11 as a group (Br. 9). We select claim 1 as the representative claim for this group, and the remaining claims 2-9 and 11 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants argued that Examiner erred in rejecting claim 1 because, “Carlin neither teaches nor discloses identifying shadow sub-regions in a digital image” (Br. 8), because Carlin uses light ray tracing,

which predicts the path of light rays through a digital room to create a digitally lighted room, instead of selecting existing shadows from a user image and then reinserting them in the digital image with different floor covering as in the present invention. (Br. 9.)

Examiner argued that the Appellants are arguing limitations not recited in the claims; that is, the Appellants are arguing selecting *existing shadows* and *reinserting* them in a digital image even though the claims “merely recite selecting at least one shadow sub-region of the manipulation surface which is visible and covered by at least one shadow.” (Answer 10.)

In order to determine whether the Examiner erred in rejecting claim 1 as obvious in view of Whitworth and Carlin, we first construe the claim limitations at issue. During examination of patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). “[T]he words of a claim 'are generally given their ordinary and customary meaning.'” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal citations omitted). The “ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003) (claims must be interpreted “in view of the specification” without importing limitations from the specification into the claims unnecessarily).

Claim 1 calls for “selecting at least one shadow sub-region of the manipulation surface which is visible and covered by at least one shadow” and “inserting the at least one shadow sub-region of the manipulated surface into the digitized pattern in registry with the manipulation surface.” (FF 1-2). The ordinary and customary meaning of “select” is to choose from a number or group: to pick. (FF 4). The ordinary and customary meaning of “sub-region” is a subdivision or a region. (FF 6). Claim 1 does not recite expressly or implicitly temporal conditions on these steps. (FF 7). Unless the steps of a method claim actually recite an order, the steps are not ordinarily construed to require one. *Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003); *Interactive Gift Express, Inc. v. CompuServe Inc.*, 256 F.3d 1323, 1342-43 (Fed. Cir. 2000). *See also Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1322 (Fed. Cir. 1999). However, such a result can ensue when the method steps implicitly require that they be in the order written. *Interactive Gift Express, Inc.* at 1342-43.

We construe the “selecting” step of claim 1 to require the picking of a subdivision of the manipulation surface which is visible and is or will be at some time covered by a shadow. Our construction encompasses, but is not limited to, the selection of sub-regions that happen to include *pre-existing* shadows, as argued by the Appellants. The sub-region could be a subdivision of the manipulation surface where a shadow will be placed. We construe the “inserting” step of claim 1 to require that the subdivision of the manipulation surface, picked in the “selecting” step, is inserted into the digitized pattern. Again, our construction encompasses, but is not limited to, *reinserting pre-existing* shadows, as argued by the Appellants. Since, claim

1 does not contain any temporal conditions on the “selecting” or “inserting” step, these steps may be performed after the step of reinserting the removed non-floor covering elements.

Next, we determine the scope and content of Whitworth and Carlin. Whitworth discloses selecting a carpeted area of a floor of a room image and replacing the color or pattern of the floor. (FF 8-11.) Whitworth also discloses that information on what lighting conditions the room image was photographed is known. (FF 11.) Carlin discloses using ray tracing to create shadows in an image of a furnished room. (FF 12-13.) As Appellant admits, light ray tracing predicts the path of light rays to create a digitally lighted room. (Br. 9.)

The prediction of the light ray tracing meets the selecting step of claim 1 because it would choose a subdivision of the manipulation surface which would be shadowed after the light ray tracing. In predicting which areas of the image are lit, the shadowed (i.e. not lit) areas would also be determined. The creation of the digitally lighted room by the light ray tracing meets the inserting step of claim 1, because it would insert the sub-region into the digitized pattern by creating the lighting affects. Applying the ray tracing of Carlin to Whitworth’s image, which includes furniture and lighting information, would result in shadows on the carpet.

Finally, the Appellants argue that the claimed invention would have been non-obvious over the combination of Whitworth and Carlin because the light ray tracing of Carlin requires information about light sources and, therefore, Carlin would be unable to correctly recreate the shadows from the

digital image of the user in the preview image of the present invention. (Br. 9.)

“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).

Whitworth discloses that information on what lighting conditions the room was photographed under is known. (FF 11.) Providing the light ray tracing as in Carlin to the digital image of Whitworth would predictably result in an image of a digitally lit room, and having shadows. (FF 15.) The image would then look more realistic. Examiner states that the motivation for combining is “to provide a photorealistic image that looks completely real.” (Answer 11.) We are satisfied that the Examiner has articulated an apparent reasoning with logical underpinning for the legal conclusion of obviousness. Furthermore, we observe that Whitworth discloses that a photorealistic image induces a person to buy an object and minimizes return of items. (FF 16.) This provides further motivation to lead one of ordinary skill to the claimed invention.

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a) and affirm the Examiner. We reach the same finding as to claims 2-9 and 11 which stand or fall with claim 1.

Claims 12-20 and 22

The Appellants argued claims 12-20 and 22 as a group (Br. 9). We select claim 12 as the representative claim for this group, and the remaining claims 13-20 and 22 stand or fall with claim 12. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants merely state that the “tagging” step of claim 12 is not disclosed in the references. (Br. 9.) In addressing claim 12, the Examiner relies on the rationale used to reject claims 1-9 and 11 (Answer 8), which points to paragraph 0006 and Figure 7 of Whitworth to disclose this limitation (Answer 6). The Appellants do not explain why these disclosures are not evidence that Whitworth discloses the “tagging” step.

The Appellants have made arguments with respect to these claims which simply state, in whole or in part, that the references do not disclose or suggest certain claimed features – without responding to the Examiner’s reasoning in establishing a prima facie case of obviousness. “It is not the function of this [Board] to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions over the prior art.” *In re Baxter Travenol Labs*, 952 F.2d 388, 391 (Fed. Cir. 1991). A general allegation that the art does not teach any of the claim limitations is no more than merely pointing out the claim limitations. A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. 37 C.F.R. § 41.37(c)(1)(vii).

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claim 12 and claims 13-20 and 22 which stand or fall with claim 12.

Claims 23-31 and 33

The Appellants argued claims 23-31 and 33 as a group (Br. 9). We select claim 23 as the representative claim for this group, and the remaining claims 24-31 and 33 stand or fall with claim 23. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants merely state that the step of “providing a Web Site system,” in addition to the “tagging” step, is not disclosed in the references. (Br. 9.) In addressing claim 23, the Examiner relies on the rationale used to reject claims 1-9 and 11 (Answer 8), which points to Figure 4 of Whitworth to disclose this limitation (Answer 7). The Appellants have not argued why, in light of this evidence, Whitworth does not disclose the step of “providing a Web Site system.”

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claim 23 and claims 24-31 and 33 which stand or fall with claim 23.

Claims 34-41 and 43

The Appellants argued claims 34-41 and 43 as a group (Br. 9). We select claim 34 as the representative claim for this group, and the remaining claims 33-41 and 43 stand or fall with claim 34. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Appellants merely state, “Claim 34-41 and 43 differ from claims 1-9 and 11, claims 12-20 and 22, and claims 23-31 and 33. For example, claim 34 has less steps than claim 1.” “A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.” 37 C.F.R. § 41.37(c)(1)(vii) (2004).

Therefore, we find that the Appellants have not shown that the Examiner erred in rejecting claims 34-41 and 43.

CONCLUSIONS OF LAW

We conclude that the Appellants have not shown that the Examiner erred in rejecting claims 1-9, 11-20, 22-31, 33-41 and 43 under 35 U.S.C. § 103(a) as unpatentable over Whitworth in view of Carlin.

DECISION

The decision of the Examiner to reject claims 1-9, 11-20, 22-31, 33-41 and 43 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) (2007).

AFFIRMED

JRG

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