

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN GOLDBERG

Appeal 2008-4327
Application 11/248,722
Technology Center 3600

Decided: December 11, 2008

Before JAMESON LEE, SALLY C. MEDLEY, and MICHAEL P.
TIERNEY, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

DECISION ON APPEAL

A. STATEMENT OF THE CASE

This is a decision on appeal by an Appellant under 35 U.S.C. § 134(a) from a final rejection of claims 1-14. The Appellant requests reversal of the

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Examiner's rejection of those claims. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

Reference Relied on by the Examiner

Gronlie	4,074,537	Feb. 21, 1978
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The Rejections on Appeal

The Examiner rejected claims 1-14 under 35 U.S.C. § 103(a) as unpatentable over Gronlie.

The Invention

The invention relates to a marine structure having a plurality of slats that are arranged with a particular width to gap ratio. (Spec. 1:¶3.) Claim 1 is reproduced below (Claims App'x 12:1-5):

1. A marine structure, comprising:

a structural frame; and

a plurality of slats that are attached to the structural frame to form a surface of the marine structure, where the plurality of slats has a width to gap ratio between 2.29:1 and 2.40:1.

B. ISSUES

1) Did the Examiner err in determining that a prima facie case of obviousness has been established in light of the teachings of Gronlie on the basis that a "width to gap ratio" of between 2.29:1 and 2.40:1 for spacing boards on a marine structure such as a pier would have been within the ordinary considerations of one with ordinary skill in the art?

2) After weighing the evidence of obviousness and the secondary considerations of non-obviousness, did the Examiner err in determining that on balance the record as a whole establishes that Appellant's claimed invention would have been obvious?

C. FINDINGS OF FACT

1. A "width to gap ratio" in the context of the Appellant's invention is the ratio of the width of an individual slat to the distance between adjacent slats. (Spec. 3:¶ 13.)

2. Gronlie discloses a dock 10 having a walking surface 11 formed by "a plurality of spaced-apart transverse boards 17-17." (Gronlie 2:42-44.)

3. In Gronlie, the walking surface serves as an elevated support over the surface of a body of water 12. (Gronlie 2:33-36.)

4. Gronlie does not place any limits on the size or spacing of the boards of the walking surface.

5. The Appellant submitted an affidavit dated September 15, 2006 that is alleged to provide evidence of unexpected results.

6. The affidavit includes statements by the Appellant that a pier having a width to gap ratio of 2.33:1 was largely undamaged by Hurricane Katrina on August 29, 2005. (Affidavit 15:¶¶ 2&3.)

7. In his affidavit, the Appellant states that neighboring piers without a width to gap ratio of 2.33:1 were destroyed. (Affidavit 15:¶ 3.)

8. According to the Appellant, an article titled "Pier Pressure" by Casey Lee that was published in the October 2005 issue of "This That & The Other" substantiates his testimony. (Affidavit 15-16:¶¶ 4&5.)

9. A copy of the article was included as evidence. (Affidavit 17: “Pier Pressure”.)

10. The “Pier Pressure” article describes a difference between the Appellant’s pier and the neighboring piers. According to the article (Affidavit 17: “Pier Pressure” col. 2, ll. 4-7):

Another important thing, since the piers are built a little more lightweight, is to build them lower to the water so the debris doesn’t smash into the pier during a storm, but instead floats over it.

11. None of the Appellant’s claims require a minimum height that the marine structure or pier is built above the water.

12. The evidence submitted does not establish that the materials of the neighboring piers were the same as the Appellant’s pier.

13. The evidence submitted does not establish that the thicknesses of the slats of the neighboring piers were the same as the Appellant’s pier.

14. The evidence submitted does not establish the relative age of the Appellant’s pier as compared with the neighboring piers.

15. The evidence submitted does not establish that the number or size of support posts of the Appellant’s pier are the same as the other piers.

16. The evidence submitted does not establish that the means of attaching the walking surface of the neighboring piers is the same as that of the Appellant’s pier.

17. The “Pier Pressure” article states that the pier that survived Hurricanes Katrina and Ivan has boards that are 2 inches wide by $\frac{3}{4}$ inches thick and spaced apart by about $\frac{3}{4}$ inches. (Affidavit 17: “Pier Pressure” col. 2, ll. 11-12.)

18. The width to gap ratio of 2 inch boards that are separated by $\frac{3}{4}$ of an inch is approximately 2.67:1.

D. PRINCIPLES OF LAW

Obviousness is a legal determination made on the basis of underlying factual inquiries including: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations, i.e. objective evidence of non-obviousness. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).

When the general conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456 (CCPA 1955).

For determining obviousness, the Examiner bears the initial burden, on review of the prior art, of presenting a prima facie case of unpatentability, and if that initial burden is met, the burden of coming forward with evidence or argument shifts to the applicant. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). After rebuttal evidence or argument is submitted by the Applicant in response to the Examiner's demonstration of prima facie obviousness, a determination is then made on the basis of an evaluation of the totality of the record, once again including the evidence of obviousness, and the Examiner need only establish obviousness by a preponderance of evidence. *Id.* at 1445. A prima facie case of obviousness is established when the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976); *In re Lulu*, 747 F.2d 703, 705 (Fed. Cir. 1984). One with ordinary skill in the art is presumed to have skills apart from what the prior

art references explicitly say. *See In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985). It is not necessary to locate precise teachings in the prior art directed to the specific subject matter claimed, because inferences and creative steps which a person with ordinary skill in the art would employ should be considered. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). A person of ordinary skill in the art is also a person of ordinary creativity, and is not an automaton. *Id.* at 1742.

A reference is not limited in its teaching value to solving the problem with which an applicant is concerned but is instead relevant for all it contains. *In re Heck*, 699 F.2d 1331, 1333 (Fed. Cir. 1983); *In re Gershon*, 372 F.2d 535, 539 (CCPA 1967).

In order to establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. *In re Clemens*, 622 F.2d 1029, 1035-36 (CCPA 1980). Furthermore, to show unexpected results the claimed invention must be compared with the closest prior art. *In re Fracallossi*, 681 F.2d 792, 794 (CCPA 1982); *In re Reuter*, 670 F.2d 1015, 1023 (CCPA 1981); *In re Fenn*, 639 F.2d 762, 765 (CCPA 1981).

E. ANALYSIS

The Examiner rejected claims 1-14 under 35 U.S.C. § 103(a) as unpatentable over Gronlie. Claims 1, 11, and 12 are independent claims.

The Appellant disputes that the Examiner has established a prima facie case of obviousness in rejecting claims 1, 11, and 12 based on Gronlie. In the alternative, the Appellant argues that in light of the objective evidence of non-obviousness submitted, the claimed invention would not have been obvious to a person of ordinary skill in the art.

Evidence of Obviousness

Each of claims 1 and 11 include a limitation that the marine structure includes slats that have a “width to gap ratio between 2.29:1 and 2.40:1.” (Claims App’x 12:4-5; 13:6-7.) Claim 12 includes the limitations that “the slats have a width of about 1 $\frac{3}{4}$ inches” and “the gap between slats is about $\frac{3}{4}$ inches.” (Claims App’x 13:12-13.) Dependent claims 2-10, 13, and 14 are argued collectively with claims 1, 11, and 12.

The Examiner found that Gronlie discloses all the elements of claims 1, 11, and 12 with the exception of the above-quoted limitations. The Examiner determined that the Appellant has not shown that the claimed ratios and dimensions produce an unexpected result. (Ans. 5:1-4.) The Examiner reasoned that a person of ordinary skill in the marine structure art would have selected those claimed ratios and dimensions for the slats of Gronlie’s dock as a matter of obvious design choice. (Ans. 6:2-4.)

The Appellant contends that the purpose of the claimed ratios and dimensions is to prevent storm damage. The Appellant argues that Gronlie does not discuss the potential for storm damage. According to the Appellant, a person of ordinary skill in the art would have no reason to modify Gronlie’s board dimensions or spacing to create a storm resistant structure. (App. Br. 6:4-8:28.)

The Appellant’s arguments are misplaced. A reference is not limited in its teaching value to solving the problem with which an applicant is concerned but is instead relevant for all it contains. *In re Heck*, 699 F.2d at 1333; *In re Gershon*, 372 F.2d at 539. Here, whether Gronlie is or is not concerned with the storm resistance of its dock is of no moment. Gronlie

discloses a dock 10 having a walking surface 11 formed by “a plurality of spaced-apart transverse boards 17-17.” (Gronlie 2:42-44.) The Examiner has relied on that disclosure in Gronlie as establishing a prima facie case of obviousness of the claimed invention.

A prima facie case of obviousness is established when the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d at 1051; *In re Lulu*, 747 F.2d at 705. One with ordinary skill in the art is presumed to have skills apart from what the prior art references explicitly say. *See In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985). It is not necessary to locate precise teachings in the prior art directed to the specific subject matter claimed, because inferences and creative steps which a person with ordinary skill in the art would employ should be considered. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). A person of ordinary skill in the art is also a person of ordinary creativity, and is not an automaton. *Id.* at 1742.

A “width to gap ratio” in the context of the Appellant’s invention is the ratio of the width of an individual slat to the distance between each adjacent slat. (Spec. 3:¶ 13.) One with ordinary skill in the art does not need to be told specifically of an exact “width to gap ratio” before he or she can proceed with the design and construction of a marine structure such as a pier. The choice of a desirable width to gap ratio is within the basic skill and ordinary creativity possessed by one with ordinary skill in the art. At a minimum, Gronlie would appear to suggest that one with ordinary skill in the art can choose whatever width to gap ratio that is desirable as Gronlie does not specifically disclose any particular dimensions.

A person of ordinary skill in the marine structure art would have known that how far the boards of a walking surface are spaced apart is a parameter based on a variety of ordinary design and construction considerations, e.g., cost of raw materials (fewer boards are needed with a wider gap), cost of construction (fewer boards means fewer boards to nail down and transport), safety considerations (a larger gap means that more objects may fall through the gap), usability (a smaller gap means firmer footing and better support for articles), and weight considerations (more boards means more weight requiring more support posts).

The Appellant argues that Gronlie does not teach any gap ratio or any slat widths or gap widths for its boards. (Ans. 8:15-21). That argument is misplaced. Gronlie expressly teaches a walking surface having “a plurality of spaced-apart transverse boards.” (Gronlie 2:44.) Evidently, the Appellant discounts the teachings of Gronlie because it does not assign numerical dimensions to the board sizes and spacing. However, as discussed above, a person of ordinary skill in the art must take into account a variety of considerations when constructing a pier. A skilled artisan would have understood that Gronlie’s disclosure of “a plurality of spaced-apart transverse boards” recognizes a wide range of possible board sizes and spacing. It is mere ordinary skill and ordinary creativity to select the desired board sizes and spacing. Gronlie’s not disclosing specific dimensions suggests that the matter can be left to one with ordinary skill in the art.

When the general conditions of the claims are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d at 456. The Examiner reasonably determined that in light of Gronlie’s teachings, a person of ordinary skill and

creativity in the marine structure art would have known to construct a dock having board dimensions and gap sizes that satisfy those required by the Appellant's claims. The Appellant has not shown error in the Examiner's determination that a prima facie case of obviousness has been established by the teachings of Gronlie.

Secondary Considerations

For determining obviousness, the Examiner bears the initial burden, on review of the prior art, of presenting a prima facie case of unpatentability, and if that initial burden is met, the burden of coming forward with evidence or argument shifts to the applicant. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). After rebuttal evidence or argument is submitted by the Applicant in response to the Examiner's demonstration of prima facie obviousness, a determination is then made on the basis of an evaluation of the totality of the record, once again including the evidence of obviousness, and the Examiner need only establish obviousness by a preponderance of evidence. *Id.*

The Appellant submitted an affidavit dated September 15, 2006 that is alleged to provide evidence of unexpected results. That affidavit includes statements by the Appellant that a pier having a width to gap ratio of 2.33:1 was largely undamaged by Hurricane Katrina on August 29, 2005. (Affidavit 15:¶¶ 2&3.) The Appellant states that neighboring piers without a width to gap ratio of 2.33:1 were destroyed. (Affidavit 15:¶ 3.) According to the Appellant, an article titled "Pier Pressure" by Casey Lee that was published in the October 2005 issue of "This That & The Other" substantiates his testimony. (Affidavit 15-16:¶¶ 4&5.) A copy of the article was included as evidence. (Affidavit 17: "Pier Pressure".)

In order to establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. *In re Clemens*, 622 F.2d at 1035. Here, claims 1 and 11 call only for a marine structure with a frame and slats that has a width to gap ratio within a specific range. Claim 12 requires only that slats and gaps have specific dimensions establishing a ratio within that range. Therefore, to be commensurate in scope with the claims, the evidence must establish that the width to gap ratio is the reason why the Appellant's pier survived a storm when other piers did not.

The Appellant's evidence does not account for other factors that may have been responsible for the difference in outcome between the Appellant's pier and neighboring piers. Those factors include: 1) whether the materials of the neighboring piers were the same as the Appellant's pier; 2) whether the thicknesses of the slats of the neighboring piers were the same as the Appellant's pier; 3) the relative age of the Appellant's pier as compared with the neighboring piers; 4) whether the number or size of support posts of the Appellant's pier are the same as the other piers; and 5) whether the means of attaching the walking surface of the neighboring piers is the same as that of Appellant's pier.

All of the above-noted factors are relevant in determining how effectively a pier can withstand a storm. Higher grade materials may be capable of withstanding more damage than lower grade materials. Older piers may be more weathered and fragile than newer piers. Stronger supports posts, or additional support posts, may provide greater support for a walking surface. The Appellant does not account for variations based on those factors.

Moreover, the “Pier Pressure” article does describe at least one other difference between the Appellant’s pier and the neighboring piers that is distinct from the width to gap ratio. According to the article (Affidavit 17: “Pier Pressure” col. 2, ll. 4-7):

Another important thing, since the piers are built a little more lightweight, is to build them lower to the water so the debris doesn’t smash into the pier during a storm, but instead floats over it.

None of the Appellant’s claims require a marine structure or pier that is built lower to a body of water than other piers. Indeed, the claims are silent as to any height requirement above the water. Yet, the article makes clear that lowering the pier provides a measure of storm resistance.

Additionally, the affidavit accounts for only a pier having boards with a width to gap ratio of 2.33:1. (Affidavit 15:¶ 2.) To be commensurate in scope with the Appellant’s claims, the evidence must account for the entire breadth of claim scope as establishing the alleged unexpected result. *In re Clemens*, 622 F.2d at 1036. At least claims 1 and 11 establish a ratio range of 2.29:1 to 2.40:1. However, the evidence addresses only a single ratio within that range. The evidence does not account for the entire scope of claims 1 and 11, i.e. the entire range of width to gap ratios.

For the foregoing reasons, on this record, the evidence is not commensurate in scope with the claims.

Furthermore, to show unexpected results the claimed invention must be compared with the closest prior art. *In re Fracallossi*, 681 F.2d at 794; *In re Reuter*, 670 F.2d at 1023; *In re Fenn*, 639 F.2d at 765. On this record, the closest prior art is a marine structure which differs from the Appellant’s only in the claimed width to gap ratio. As discussed above, the Appellant has not

shown that the neighboring piers are identical in construction to the Appellant's pier but for the claimed range of width to gap ratios. The evidence does not compare the Appellant's pier with the closest prior art.

Lastly, the "Pier Pressure" article does not even describe a pier that has a width to gap ratio that falls within the required range. The article states that a pier that survived storms Katrina and Ivan has boards that are 2 inches wide by $\frac{3}{4}$ inches thick and spaced apart by about $\frac{3}{4}$ inches. (Affidavit 17: "Pier Pressure" col. 2, ll. 11-12.) The width to gap ratio of 2 inch boards that are separated by $\frac{3}{4}$ of an inch is approximately 2.67:1. That ratio is outside the ratio claimed range of 2.29:1 to 2.40:1.

According to the Appellant, the dimensions of the boards quoted in the article are incorrect and the affidavit correctly states the width of the boards as 1.75 inches. (App. Br. 8:FN 1; Reply Br. 5:7-17.) However, argument of counsel cannot take the place of evidence lacking in the record. *Estee Lauder Inc.*, 129 F.3d at 595 (Fed. Cir. 1997). There is no evidence that the board dimensions as stated in the article are in error. The article is evaluated for evidence of non-obviousness based on the facts that it states. We credit the stated facts in the article over the argument of counsel. As disclosed in the article, the pier that survived the hurricanes had boards with a gap to width ratio that is outside the Appellant's claimed ratio.

We have considered the evidence of alleged unexpected results. However, for the reasons discussed above, the Appellant's evidence of non-obviousness is weak and the Examiner's evidence of obviousness is strong. On balance, the evidence of obviousness outweighs the evidence of non-obviousness.

We sustain the Examiner's rejection of claims 1-14 under 35 U.S.C. § 103(a) as unpatentable over Gronlie.

F. CONCLUSION

1) The Examiner did not err in determining that a prima facie case of obviousness has been established in light of the teachings of Gronlie on the basis that a "width to gap" ratio of between 2.29:1 and 2.40:1 for spacing boards on a marine structure such as a pier would have been within the ordinary considerations of one with ordinary skill in the art.

2) The Examiner did not err in determining that the record as a whole establishes that Appellant's claims are obvious.

G. ORDER

The rejection of claims 1-14 under 35 U.S.C. § 103(a) as unpatentable over Gronlie is **affirmed**.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.13(a).

AFFIRMED

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