UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHELTON T. BARNES, EDDIE MAX BROCK, CHRISTOPHER A. LARSEN and GERALD R. PLACE

Appeal No. 2006-2869
Application No. 10/385,520
Technology Center 3700

ON BRIEF

Before OWENS, LEVY, and FETTING, *Administrative Patent Judges*.

LEVY*, Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-14, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to a low profile gas burner for a cooking appliance (specification, page 1). In particular, the invention relates to an intermediate portion of the gas burner maintaining a vertically spaced relationship between the inlet portion and the outlet portion of .75 inch to about 2.5 inch (specification, page 3). More specifically, the intermediate portion maintains a vertically spaced relationship between the inlet portion and the outlet portion of at least one tubing diameter, and more preferably, two tubing diameters (id.).

Claim 1 is representative of the invention, and is reproduced as follows:

> A cooking appliance comprising:
>
> an oven cavity; and
>
> a gas burner assembly positioned within the oven cavity, said gas burner assembly including a first end, defining an inlet portion, interconnected with a second end, defining an elongated outlet portion, through an intermediate portion, wherein said intermediate portion maintains a vertically spaced relationship between the inlet portion and outlet portion, said spaced relationship being from about 0.75 inches (1.91 cm) to about 2.5 inches (6.35cm).

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Perry	3,422,809	Jan. 21, 1969

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Perry.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (mailed March 23, 2006) for the examiner's complete reasoning in support of the rejection, and to the brief (filed January 23, 2006) and reply brief (filed May 24, 2006) for the appellants' arguments thereagainst.

Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants could have made but chose not to make in the brief have not been considered. *See* 37 C.F.R. § 41.37(c)(1)(vii)(eff. Sept. 13, 2004).

OPINION

In reaching our decision in this appeal, we have carefully considered the subject matter on appeal, the rejection advanced by the examiner, and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer. Upon consideration of the record before us, we make the determinations which follow.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed.Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. *Note In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed.Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole. *See id.*; *In re Hedges*, 783 F.2d 1038,

1039, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The examiner's position (answer, page 5) is that

> Perry does not specifically recite the claimed ranges and proportions for the intermediate portion. However, it should be noted that the only mention vaguely resembling any criticality for the claimed ranges and proportions in the entire disclosure is a single sentence that states that the disclosed arrangement minimizes the height of the burner in order to enhance the size of the oven cavity. There appears to be no mention of any criticality for the specific ranges and proportions recited in the claims. As such, these limitations are simply design modifications based on spatial considerations and have no apparent criticality.

The examiner adds (answer, pages 5 and 6) that

> It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the claimed range into the invention disclosed by Perry, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the are. *In re Aller*, 105 USPQ 233; *In re Swain*, 156 F.2d 239.

Appellants' position (brief, page 7) is that in Perry, there is no attempt to establish a low profile gas burner. Appellants assert (brief, page 8) that "conventional wisdom would indicate that holding the intermediate or rising section to a minimal length would create problems with a reverse density driven flow and 'popping' of the gas inside the burner tube. The inventor's have looked past this and developed the low profile burner of the invention." It is argued (brief, page 9) that

> There is no suggestion or motivation in Perry that would indicate the obviousness of providing the specifically claimed vertical spaced relationship between in inlet portion and the outlet portion of a gas burner assembly to

> overcome the negative effects of a reverse density driven flow and enhance oven cavity size. This is particularly true given that none of the art of record even remotely addresses the problem solved by the invention.

With respect to the examiner's reliance on *In re Aller*, 105 USPQ 233, appellants argue (brief, page 8) that

> In Aller, the prior art showed essentially the same process as that recited in the claims, and the art suggested the possibility of changing parameters of that process, i.e., a motivation existed. In contrast, the prior art relied upon by the Examiner does not even recognize the problem addressed by the inventors of the present application, let alone suggest any of the claimed range limitations.

From our review of the record, we find, for the reasons which follow, that the teachings and suggestions of Perry would not have suggested to an artisan the invention set forth in claims 1-14. At the outset, we note the disclosure in appellants' specification (page 2) that conventionally, oven cavities are designed with a considerable amount of space allocated for the gas burner assembly, and that specifically, a conventional gas burner assembly is designed such that a vertical distance of at least 3 inches separates the inlet portion from the outlet portion. This distance requirement has been seen as necessary to avoid the negative effects associated with a reverse density driven flow which occurs when the cooking appliance is hot and gas flow to the burner is off. It is further disclosed (specification, page 3) that "[p]articularly, there exists a need for a low profile gas burner assembly having an inlet portion and an outlet position separated by a distance less than the conventional 3 inches (7.62 cm) that does not suffer from the effects of a reverse density driven flow." As disclosed on pages 3 and 8 of the specification, for a tubing diameter of .75 inches, vertical spacing of .75 inch to about 2.5 inches, which is about 1 to 3.33 times the tubing diameter, provides a low profile burner arrangement which avoids reverse driven energy flow.

From the disclosure, we do not agree with the examiner (answer, page 6) that appellants have failed to satisfy their burden of establishing that such a problem exists. In our view, from appellants' disclosure (which was filed under oath or declaration) that the conventional wisdom

was to make the vertical spacing between the inlet and outlet at least three inches in length, we find that to meet the need for an enhanced oven cavity size, appellants went against the conventional wisdom and provided a low profile gas burner that will allow for an enlarged oven cavity while preventing reverse density driven flow.

Turning to Perry, we find that the reference is directed to a self cleaning oven (col. 1, line 13). Although Perry discloses a gas burner 26 having an inlet, unnumbered, and holes 26a, we find Perry to be silent as to the size of the vertical relationship between the inlet and outlet portions, and the examiner has not pointed to any teaching or disclosure in Perry that would suggest the size of the vertical relationship between the inlet and outlet portions, or any teaching or suggestion that the vertical relationship between the inlet and outlet portions could be modified. The examiner is speculating in the assertion (answer, page 6) that it is inherent in Perry that the pipes have a preferred range of measurements, because there is nothing in the reference to support the assertion by the examiner. Because the independent claims recite specific ranges and Perry is silent as to any sizes or ranges, we do not agree with the examiner that the claimed limitations are simply design modifications based on spatial considerations and have no apparent criticality. The disclosed limitations regarding the vertical relationship between the inlet and outlet portions as recited in independent claims 1 and 8 are asserted to overcome the problem of reverse density driven flow, while establishing an enlarged oven cavity. In the absence of any convincing evidence that the particular claimed dimensions would have been an obvious optimization of workable ranges that would have been within the level of skill in the art, we are not convinced that a prima facie case of obviousness has been established. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See *In re Swain et al*., 156 F.2d 239, 240, 70 USPQ 412, 413 (C.C.P.A. 1946). However, because Perry is silent as to the size or proportions of the vertical relationship between the inlet and outlet portions, and merely shows a gas burner without any ranges, dimensions, etc., we find that the prior art applied by the examiner does not show the general conditions from which the optimum or workable ranges could be determined. In addition, we find the examiner's arguments regarding *In re*

Aller,105 USPQ 233, 235, 220 F.2d 454, 456 (C.C.PA. 1955) to be misplaced, as correctly noted by appellants (reply brief, page 5). In *In re Aller*, 105 USPQ at 235, the general concept and ranges were disclosed, and the particular ranges were at issue. As noted *supra*, we have no disclosure of any ranges or dimensions in Perry, but merely a disclosure of a gas burner. Thus, we do not agree with the examiner (answer, page 5) that there was no criticality for the specific ranges and proportions recited in the claims.

From all of the above, we hold that the examiner has failed to establish a *prima facie* case of obviousness of claims 1-14. Accordingly, we cannot sustain the rejection of these claims.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-14 under 35 U.S.C. § 103 is reversed.

REVERSED

TERRY J. OWENS Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
STUART S. LEVY Administrative Patent Judge	
ANTON W. FETTING Administrative Patent Judge	

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