

The opinion in support of the decision being entered today was **not** written for publication and is **not** precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EUGEN SCHWARZKOPF

Appeal No. 1998-2011
Application No. 08/707,267

HEARD: October 11, 2000

Before COHEN, NASE, and JENNIFER D. BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-3, 7 and 9-11, which are all of the claims pending in this application.

BACKGROUND

The appellant's invention relates to an electrical heater for a mold. An understanding of the invention can be derived from a reading of exemplary claim 1, which appears in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Churchill	Re 30,126	Oct. 23, 1979 ¹
Harpster et al. (Harpster)	1,667,857	May 1, 1928
Fessenden	4,197,449	Apr. 8, 1980
Bauchert et al. (Bauchert)	4,263,577	Apr. 21, 1981
Porzky	4,575,619	Mar. 11, 1986
Schwarzkopf	4,593,182	Jun. 3, 1986
German Utility Model (the German reference)	9,217,183.4 G	Apr. 1, 1993 ^{2,3}

The following rejections are before us for review.

- (1) Claims 1, 7 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over the German reference in view of Bauchert.

¹ Reissue of U.S. Pat. No. 3,982,099, issued September 21, 1976.

² We derive our understanding of this reference from an English translation prepared for the PTO in 1995, a copy of which is appended hereto.

³ This reference is discussed on page 3 of the appellant's specification. However, there is no indication in the application file as to whether the appellant or the examiner supplied the copy of the document and the translation thereof placed in the application file. Additionally, it does not appear that this reference has been officially made of record by citation in an information disclosure statement or notice of references cited (Form PTO-892). The examiner should take appropriate action to clarify the record and correct this informality.

Appeal No. 1998-2011
Application No. 08/707,267

(2) Claim 2 stands rejected under 35 U.S.C. § 103 as being unpatentable over the German reference in view of Bauchert, as applied to claims 1, 7 and 9 above, and further in view of either Schwarzkopf or Harpster.

(3) Claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over the German reference in view of Bauchert, as applied to claims 1, 7 and 9 above, and further in view of Churchill.

(4) Claims 10 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over the German reference in view of Bauchert, as applied to claims 1, 7 and 9 above, and further in view of Fessenden and Porzky.

Reference is made to the brief and reply brief (Paper Nos. 22⁴ and 20) and the final rejection and answer (Paper Nos. 15 and 18) for the respective positions of the appellant and the examiner with regard to the merits of these rejections.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the following determinations.

⁴ The appellant filed a "Corrected Brief" on March 19, 1998 to correct informalities in the brief filed October 16, 1997 (Paper No. 17).

Appeal No. 1998-2011
Application No. 08/707,267

Independent claim 1 recites a heater comprising a casing formed by "a succession of **similarly generally** square and inwardly open U-section rings," each including a pair of parallel legs and "a bight portion extending flatly **substantially** parallel to the axis" (emphasis ours). Additionally, claim 1 requires that the transverse widths of the legs and bights be "**generally the same**" and that the transverse [overall] width of the casing be "**generally** five times as great as the width of the legs" (emphasis ours).

The terms "generally" and "substantially" are terms of degree. When a word of degree is used, it is necessary to determine whether the specification provides some standard for measuring that degree. See Seattle Box Company, Inc. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984).

In Seattle Box, the court set forth the following requirements for terms of degree:

When a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree. The trial court must decide, that is, whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification.

In Shatterproof Glass Corp. v. Libbey-Owens Ford Co., 758 F.2d 613, 624, 225 USPQ 634, 641 (Fed. Cir. 1985), the court added:

If the claims, read in light of the specifications [sic], reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more.

Indeed, the fundamental purpose of a patent claim is to define the scope of protection⁵ and hence what the claim precludes others from doing. All things considered, because a patentee has the right to exclude others from making, using and selling the invention covered by a United States letters patent, the public must be apprised of what the patent covers, so that those who approach the area circumscribed by the claims of a patent may more readily and accurately determine the boundaries of protection in evaluating the possibility of infringement and dominance. See In re Hammack, 427 F.2d 1378, 1382, 166 USPQ 204, 208 (CCPA 1970).

In the present case, we have reviewed the appellant's disclosure to help us determine the meaning of the above-noted terminology from claim 1. That review has revealed that the appellant's specification states at pages 5 and 6 that: (1) the casing of Figure 5 is corrugated and is formed of "square U-section rings," (2) the rings are each formed by a pair of identical legs of a width w measured radially of the axis A which is "identical" to a width w measured parallel to the axis of bights joining the legs of each ring together and (3) the width w is "equal to about" one fifth of a diameter D of the heater. Additionally, the appellant's Figure 5 shows the bights 11 having no curvature along a direction parallel to the axis A of the heater.

However, these portions of the disclosure do not provide explicit guidelines defining the terminology "generally," "similarly generally" and "substantially." Furthermore, there are no

⁵ See In re Vamco Machine & Tool, Inc., 752 F.2d 1564, 1577 n.5, 224 USPQ 617, 625 n.5 (Fed. Cir. 1985).

Appeal No. 1998-2011
Application No. 08/707,267

guidelines that would be implicit to a person skilled in the art defining these terms that would enable such a person to ascertain what is meant by this terminology. Absent such guidance, we are of the opinion that a skilled person would not be able to determine the metes and bounds of the claimed invention with the precision required by the second paragraph of 35 U.S.C. § 112. Moreover, it is not clear whether the terminology "the transverse widths all being generally the same" requires that all of the leg widths be generally the same as one another and all of the bight widths be generally the same as one another or, alternatively, that the leg widths be generally the same as the bight widths. Therefore, we conclude that the appellant has failed to particularly point out and distinctly claim the invention as required by the second paragraph of 35 U.S.C. § 112.

New Grounds of Rejection

In light of the above, we enter the following new grounds of rejection under the provisions of 37 CFR § 1.196(b).

Claims 1-3, 7 and 9-11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention.

As discussed above, the appellant's specification does not provide guidelines defining the terminology "generally," "similarly generally" and "substantially" as used in independent claim 1. Further, it is not clear whether the terminology "the transverse widths all being generally the same" requires that all of the leg widths be generally the same as one another and

Appeal No. 1998-2011
Application No. 08/707,267

all of the bight widths be generally the same as one another or, alternatively, that the leg widths be generally the same as the bight widths. For these reasons, one of ordinary skill in the art would not be able to ascertain the metes and bounds of the invention of independent claim 1 with the precision required by the second paragraph of 35 U.S.C. § 112. Claims 2, 3, 7 and 9-11 depend from claim 1 and thus are likewise indefinite.

Claims 1-3, 7 and 9-11 are rejected under 35 U.S.C. § 112, first paragraph, as being based upon an original disclosure which fails to provide descriptive support for the subject matter now being claimed.

We initially observe that the description requirement found in the first paragraph of 35 U.S.C. § 112 is separate from the enablement requirement of that provision. See Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1560-64, 19 USPQ2d 1111, 1114-17 (Fed. Cir. 1991) and In re Barker, 559 F.2d 588, 591, 194 USPQ 470, 472 (CCPA 1977), cert. denied, 434 U.S. 1238 (1978). With respect to the description requirement, the court in Vas-Cath, 935 F.2d at 1563-64, 19 USPQ2d at 1117 stated:

35 U.S.C. § 112, first paragraph, requires a "written description of the invention" which is separate and distinct from the enablement requirement. The purpose of the "written description" requirement is broader than to merely explain how to "make and use"; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the "written description" inquiry, *whatever is now claimed*.

. . . drawings alone *may* be sufficient to provide the "written description of the invention" required by § 112, first paragraph.

Appeal No. 1998-2011
Application No. 08/707,267

The above-noted disclosure on pages 5 and 6 of the appellant's specification provides written descriptive support for the casing being formed by a succession of square U-section rings, with the transverse widths being "equal to about" one fifth the transverse width (diameter) of the casing. Original claims 6 and 11 (as filed in parent Application No. 08/302,620) provide descriptive support for the casing having a transverse width "about" five times as great as the width of the legs and "the sections" being "generally rectangular."⁶ Further, Figure 5 provides descriptive support for the bight portions extending flatly parallel to the axis. However, the original disclosure does not provide descriptive support for the claim recitations of "similarly generally" square rings, bight portions extending flatly "substantially" parallel to the axis, and the transverse width of the casing being "generally" five times as great as the width of the legs.

The obviousness rejections

Turning now to the examiner's rejections under 35 U.S.C. § 103, we recognize the inconsistency implicit in our new rejection of claims 1-3, 7 and 9-11 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention with a determination as to the patentability of these claims under 35 U.S.C. § 103. Normally, when substantial confusion exists as to the interpretation of a claim and no reasonably definite meaning can be ascribed to the terms in a claim, a determination as to patentability under 35

⁶ We also note that original claim 5, as filed in the parent application, provides written descriptive support for the transverse widths all being "generally the same."

Appeal No. 1998-2011
Application No. 08/707,267

U.S.C. § 103 is not made. See In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962) and In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). However, in this instance, for the reasons which follow, notwithstanding the indefiniteness of some of the claim terminology, we comprehend the claimed subject matter adequately to determine that the prior art relied upon by the examiner is not sufficient to establish a *prima facie* case of obviousness of the claimed subject matter. Accordingly, we shall not sustain the examiner's obviousness rejections.

Claim 1, the sole independent claim on appeal, recites an electrical heater comprising, *inter alia*, a casing unitarily formed by a succession of similarly generally square and inwardly open U-section rings each having a pair of parallel legs extending transversely of the axis and **a bight portion extending flatly substantially parallel to the axis.**

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Indeed, a *prima facie* case of obviousness is established where the reference teachings would appear to be sufficient for one of ordinary skill in the art having those teachings before him to make the proposed combination or modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

The casing of the heating element disclosed by the German reference comprises a flexible corrugated hose 3. As illustrated in Figure 3, the corrugations are rounded and do not include any flat bight portions. Bauchert discloses a variety of cross sectional shapes, including quadrangular (column 2, lines 31-34)⁷, for electric tubular heaters, but does not disclose the use of any corrugations on the casing (jacket tube 1) thereof. Therefore, we fail to see how Bauchert would have provided any suggestion to one of ordinary skill in the art to modify the corrugations of the German reference so as to comprise pairs of parallel legs extending transversely of the axis and bight portions which extend flatly (are not rounded) in the axial direction. Even if Bauchert would have suggested modification of the casing of the German reference so as to provide it with a square cross-section (as viewed in a direction normal to the longitudinal axis thereof), we share the appellant's opinion (reply brief, page 1) that there is no reason why imparting such a square cross section to the structure would require flattening the bights of the corrugations in a direction other than normal to the axis. While the metes and bounds of the terminology "substantially parallel" as used in claim 1 are not clearly defined, as discussed above, flatness in a direction normal to the axis cannot reasonably be construed as flatness "substantially parallel to the axis" as claimed.

Moreover, claim 1 further recites "each web having a longitudinal width equal to at most one-fifth the width of the legs." This feature is also not disclosed by the German

⁷ These shapes pertain to the cross section of the tubular heater normal to the longitudinal axis thereof.

Appeal No. 1998-2011
Application No. 08/707,267

reference. The German reference does not explicitly specify the ratio of the spacing between corrugations to the depth thereof. As illustrated in Figure 1, the corrugation pitch or spacing appears to be much larger than one-fifth, and in fact approximately the same as, the depth of the corrugations. The examiner, in rejecting the claims under 35 U.S.C. § 103, has not addressed this feature, much less articulated any rationale as to why it is met by the German reference or why one of ordinary skill in the art would have been motivated to modify the heater of the German reference to arrive at the claimed ratio.

Accordingly, we reverse the examiner's rejection of claim 1, and claims 7 and 9 which depend therefrom, as being unpatentable over the German reference in view of Bauchert.

The above-noted deficiencies in the combination of the German reference and Bauchert with respect to the subject matter recited in claim 1 find no cure in the various references applied to support the obviousness rejections of the claims which depend therefrom. Therefore, we also reverse the examiner's rejections of claim 2 as being unpatentable over the German reference in view of Bauchert and Schwarzkopf or Harpster, of claim 3 as being unpatentable over the German reference in view of Bauchert and Churchill, and of claims 10 and 11 as being unpatentable over the German reference in view of Bauchert, Fessenden and Porzky.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-3, 7 and 9-11 under 35 U.S.C. § 103 is reversed. New rejections of these claims under the first (written

Appeal No. 1998-2011
Application No. 08/707,267

description) and second paragraphs of 35 U.S.C. § 112 are entered pursuant to 37 CFR § 1.196(b).

This decision contains new grounds of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53131, 53197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Appeal No. 1998-2011
Application No. 08/707,267

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED; 37 CFR § 1.196(b)

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Administrative Patent Judge)	
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)	BOARD OF PATENT
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Appeal No. 1998-2011
Application No. 08/707,267

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