

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BERTIE F. HALL, JR.

Appeal No. 97-0356
Application No. 08/086,150¹

ON BRIEF

Before HAIRSTON, MARTIN, and CARMICHAEL, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

¹ Application for patent filed 07/01/93.

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DECISION ON APPEAL

This is an appeal from the final rejection of claims 2 through 4, 6 through 14 and 16 through 29. In an Amendment After Final (paper number 8), claims 2 through 4, 6 through 11, 13, 16, 25, 28 and 29 were canceled, claims 12, 14, 17 through 19, 22 and 26 were amended, and claim 30 was added to the application. In a second Amendment After Final (paper number 15), claim 17 was amended. Accordingly, claims 12, 14, 17 through 24, 26, 27 and 30 remain before us on appeal.

The disclosed invention relates to a thermocouple system that has three thermoelements connected to each other to form at least two different thermocouple junctions. The thermocouple system generates an error signal signifying a change in the calibration of one of the at least two thermocouple junctions.

Claim 12 is the only independent claim on appeal, and it reads as follows:

12. A self-diagnostic thermocouple system comprising:

three thermoelements connected to each other to form at least two different thermocouple junctions, one of said thermocouple junctions producing a first signal having a value which is a first function of a sensed temperature, the other of said at least two different thermocouple junctions

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producing a second signal having a value which is a second function of said sensed temperature; and

means for comparing said first signal to said second signal to generate an error signal in response to a ratio between said first and second signals being different from a first predetermined ratio indicative of at least one limiting value between said first and second signals, said error signal signifying a change in the calibration of one of said at least two thermocouple junctions.

The references relied on by the examiner are:

Petry	2,696,118	Dec. 7, 1954
Kleinle	3,449,174	June 10, 1969
Bock	675,473	Dec. 3,
1963		
(Canadian Patent)		

Claims 12, 20 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Petry or, in the alternative, under 35 U.S.C. § 103 as being unpatentable over Petry.

Claims 14, 17, 22 through 24 and 27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Petry in view of Bock.

Claims 18 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Petry in view of Kleinle.

Claims 26 and 30 stand rejected under 35 U.S.C. § 103 as being unpatentable over Petry in view of Bock and Kleinle.

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Claims 12, 14, 17 through 24, 26, 27 and 30 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 through 10 of copending application ser. no. 08/086,151 in view of Petry or Bock.

Reference is made to the briefs and the answer for the respective positions of the appellant and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the prior art rejections of claims 12, 14, 17 through 24, 26, 27 and 30, and sustain the provisional obviousness-type double patenting rejection of claims 12, 14, 17 through 24, 26, 27 and 30.

Appellant's response (Brief, page 15) to the provisional obviousness-type double patenting rejection is that "[a]pplicant, if required, will submit an appropriate Terminal Disclaimer." Inasmuch as appellant has not challenged the propriety of the provisional rejection, we will sustain the

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provisional obviousness-type double patenting rejection of claims 12, 14, 17 through 24, 26, 27 and 30.

Turning to the prior art rejections, Petry discloses (Figure 1) a thermocouple system that comprises three thermoelements 61, 62 and 68 connected to each other to form at least two different thermocouple junctions 60 and 67. The principal object of the Petry invention is to calibrate the potentiometer circuit connected to the thermocouple junctions (column 1, lines 63 through 66). One of the thermocouple junctions produces a first signal having a value which is a first function of a sensed temperature in oven 100, and the other of the at least two different thermocouple junctions produces a second signal having a value which is a second function of the sensed temperature in the oven. The position of the indicating device 78 relative to the potentiometer winding 77 in the circuit is referred to as a "null" position, and it is indicative of the temperature of the oven (column 7, lines 7 through 23). When the temperature of the oven changes, the circuit operates to move the indicator 78 to a new "null" position (column 7, line 23 through column 8, line

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3). The movement of the indicator 78 to a new "null" position is referred to as calibration of the potentiometer circuit.

The examiner is of the opinion (Answer, page 4) that:

It is inherent that the circuit of Petry compares voltages and ratios of voltages which may exceed a predetermined limit as this is used to calibrate and standardize the temperature measuring device. In the alternative, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the circuit of Petry compares voltages and ratios of voltages which may exceed a predetermined limit as this is used to calibrate and standardize the temperature measuring device.

Appellant argues (Amended Brief, pages 12 and 13) that:

[T]he Examiner has not shown that Petry teaches or infers a "means for comparing the first signal generated by thermocouple 60 to a second signal generated by thermocouple 67 to generate an error signal signifying a change in the calibration of one of said at least two thermocouple junctions as set forth in claim 12. In contrast, the temperature indicating device taught by Petry is responsive to the difference of the EMF's generated by the two thermocouples due to a change in temperature to change the position of the tap 78 and to generate a visual display of the temperature being sensed. In the temperature indicating device taught by Petry, it is assumed that EMF's generated by the thermocouples 60 and 67 are within calibration and it would be obvious to one skilled in the art that a loss of the calibration of thermocouple 60 or 67 would only produce a false temperature reading but would not signify that one or the other of the thermocouples 60 or 67 was out of calibration.

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We agree with appellant's argument. The examiner has mistakenly concluded (Answer, page 8) that "it would have been obvious to one of ordinary skill in the art at the time the invention was made that the entire circuit provides comparison of the signals and an indication of a change in the calibration of one of the thermocouples by the change of the variable tap." As indicated supra, Petry is concerned with calibration of the potentiometer circuit attached to the thermocouple junctions, and not with calibration of the thermocouple junctions. If the calibration of one of the thermocouple junctions was off, then the indicator 78 in Petry would certainly be set to an incorrect "null" position. Accordingly, the 35 U.S.C. § 102(b) and 35 U.S.C. § 103 rejections of claims 12, 20 and 21 are reversed.

The 35 U.S.C. § 103 rejections of claims 14, 17 through 19, 22 through 24, 26, 27 and 30 are reversed because the teachings of Bock and Kleinle do not cure the shortcomings in the teachings of Petry.

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DECISION

The prior art rejections of claims 12, 14, 17 through 24, 26, 27 and 30 are reversed, but the provisional obviousness-type double patenting rejection of these claims is affirmed.

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

AFFIRMED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
JOHN C. MARTIN)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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APJ CARMICHAEL

APJ MARTIN

DECISION: AFFIRMED

Send Reference(s): Yes No
or Translation (s)

Panel Change: Yes No

Index Sheet-2901 Rejection(s): _____

Prepared: March 15, 2000

Draft Final

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