

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHING-YUH TSAY and HENRY TIN-HANG YUNG

Appeal No. 1996-3591
Application No. 08/251,053¹

HEARD: November 2, 1999

Before HAIRSTON, RUGGIERO and HECKER, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-15, all of the claims pending in the present application. Amendments after final rejection filed on July 31, 1995 and April 29, 1996 were entered by the Examiner. An

¹ Application for patent filed May 31, 1994.

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amendment after final rejection filed February 16, 1997 was denied entry by the Examiner.

The disclosed invention relates to a multiplier circuit which includes feedback circuitry which stabilizes the multiplier circuit. More particularly, Appellants indicate at pages 6-9 of the specification that this feedback circuitry operates such that the feedback voltage tends to equalize a reference voltage and further that the feedback circuit is free from capacitance which would unstabilize the feedback circuit. A voltage divider is coupled to the feedback circuit to reduce the multiplied voltage as illustrated in Figure 2 of the drawings.

Claim 1 is illustrative of the invention and reads as follows:

1. A memory device having a multiplier circuit, comprising:

a reference generator circuit for producing a reference voltage;

said multiplier circuit coupled to said reference generator circuit for increasing a level of the reference voltage to a multiplied voltage wherein, said multiplier circuit has a feedback circuit connected to said reference generator circuit to stabilize the multiplier circuit such that a feedback voltage of said feedback circuit substantially equals said reference voltage,

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said feedback circuit being free from capacitance to
unstabilize said feedback circuit of said multiplier circuit;
and

a voltage divider coupled to the feedback circuit to
reduce said multiplied voltage of said multiplier circuit.

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The Examiner relies on the following prior art:

Masaki 1991	4,986,385	Jan. 22,
Iyengar 1991	5,063,304	Nov. 05,

Claims 1-15 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Iyengar in view of Masaki.²

Claims 8-14 further stand finally rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the invention. We note that, in an advisory office action dated August 18, 1995, the Examiner had indicated that Appellants' amendment after final rejection filed July 31, 1995 had overcome the 35 U.S.C. § 112, second paragraph, rejection of claims 1-7 and 15 made in the final rejection. In the Examiner's Answer dated February 23, 1996, however, the Examiner reasserted the 35 U.S.C. § 112, second paragraph, rejection of claims 1-7 made in the final rejection. Appellants filed a further amendment after final rejection on April 29, 1996 which the Examiner entered and indicated, in a supplemental Examiner's Answer dated May

² A correct copy of appealed claims 1 and 8 appears in the Supplemental Examiner's Answer dated May 12, 1999.

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24, 1996, that the response overcame the 35 U.S.C. § 112, second paragraph, rejection of claims 1-7. Therefore, the rejection of claims 8-14 under the second paragraph of 35 U.S.C. § 112 remains an issue to be decided in this appeal.³

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs⁴ and Answers for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, the arguments in support of the rejections and the evidence of obviousness

³ Appellants' representative at oral hearing on November 2, 1999 acknowledged an apparent inadvertent error at line 8 of claim 1 which presently recites "... to unstabilize..." instead of the intended "...to stabilize..." Appellants' representative agreed to correct such error by amendment at an appropriate later time.

⁴ The Appeal Brief was filed December 1, 1995. Reply Briefs were filed by Appellants on April 29, 1996 and Oct. 18, 1996 (Supplemental) and entered by the Examiner as indicated in the Supplemental Examiner's Answers dated May 24, 1996 and December 11, 1996. The Reply Briefs filed on July 29, 1996 and February 18, 1997 (Supplemental) were considered by the Examiner as not being limited to new points of argument or to new grounds of rejection and were not entered. Accordingly, the arguments in such Reply Briefs have not been considered in this appeal.

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relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellant's arguments set forth in the Briefs along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answers.

It is our view, after consideration of the record before us, that claims 8-14 particularly point out the invention in a manner which complies with 35 U.S.C. § 112, second paragraph. We are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention set forth in claims 1-7 and 15. We reach the opposite conclusion with respect to claims 8-14. Accordingly, we affirm-in-part.

We consider first the rejection of claims 8-14 as being indefinite under the second paragraph of 35 U.S.C. § 112. The Examiner's basis for this rejection stems from the alleged lack of clarity in the use of the term "band" in the phrase ". . . voltage range band of said reference voltage . . ." at line 4 of independent claim 8.

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The general rule is that a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

After reviewing the arguments of record, we are in agreement with Appellant that no ambiguity or lack of clarity exists in the claim language. While the term "band" is perhaps superfluous when used in conjunction with the term "range", the inclusion of same does not alter our conclusion that the claim sets forth the limitation on the reference voltage with the required specificity. It is our view that the skilled artisan, having considered the specification in its entirety, would have no difficulty ascertaining the scope of the invention recited in independent claim 8. Therefore,

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the rejection of claim 8, and claims 9-14 dependent thereon,
under the second paragraph of
35 U.S.C. § 112 is not sustained.

We now consider the 35 U.S.C. § 103 rejection of claims 1-15 as unpatentable over Iyengar and Masaki. 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.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664

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(Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 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).

As the basis for the obviousness rejection, the Examiner has initially relied on Iyengar for teaching the claimed limitations directed to a multiplier with a stabilizing feedback circuit. In recognizing Iyengar's apparent failure to disclose a voltage divider coupled to the feedback circuit, the Examiner turns to Masaki which teaches a monitoring circuit having a voltage divider which accepts a reference voltage as an input. The Examiner reasons (Answer, page 5) that, since Masaki places no restrictions on the origin of the reference voltage, one of ordinary skill would have found it obvious to use the output of Iyengar's multiplier circuit as the input reference voltage to Masaki's voltage divider. The resulting combination, the Examiner concludes, would then meet the claimed requirement

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of ". . . a voltage divider coupled to the feedback
circuit . . .".

In response, Appellants argue a lack of suggestion or
motivation in the references for combining or modifying the
teachings to establish a prima facie case of obviousness.

Appellants assert at pages 6 and 7 of the Brief:

The claimed invention cannot be used as a
template to piece together the teachings of
the prior art. In Re Fritch [sic], 23 USPQ 2d 1780
(CAFC 1983). Therefore, the Examiner has found
a voltage divider circuit from the prior art
merely piecing together the alleged teachings
of this reference with an alleged teaching from
the prior art without finding the desirability
of such a modification from the prior art.

After careful review of the Iyengar and Masaki references
in light of the arguments of record, we are in agreement with
Appellants' stated position in the Brief. Even if one could
utilize the multiplier circuit output voltage of Iyengar as
the reference input to the voltage divider of Masaki, as
proposed by the Examiner, the question arises as to why would
the skilled artisan do so? Where is the suggestion for this
combination other than Appellants' own disclosure? A finding
of obviousness, within the meaning of 35 U.S.C. § 103 requires
something more than that one "could" modify the prior art to

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arrive at the claimed subject matter. We can find no motivation for the skilled artisan to apply Iyengar's output voltage to the reference input of Masaki's voltage divider. The only basis for applying Iyengar's teachings to Masaki comes from an improper attempt to reconstruct Appellants' invention in hindsight. Accordingly, we cannot sustain the Examiner's obviousness rejection of independent claims 1 and 15, each of which requires a voltage divider coupled to a stabilizing feedback circuit of a multiplier. Since all of the limitations of independent claim 1 are not suggested by the prior art, we also can not sustain the Examiner's rejection of appealed claims 2-7 which depend therefrom.

Turning now to a consideration of independent claim 8, we note that, while we found Appellants' arguments to be persuasive with respect to the obviousness rejection of claims 1-7 and 15, we reach the opposite conclusion with respect to claims 8-14. Contrary to the recitations in independent claims 1 and 15 which require a voltage divider ". . . coupled to the feedback circuit . . .", the recitation in claim 8 places no limitation on the location of the voltage divider within the multiplier circuit. Initially, in view of the

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language of Appellants' claim 8, we find Masaki's teaching of a voltage divider to be cumulative to that of Iyengar which clearly illustrates a voltage divider 118, 120 in the multiplier circuit of Figure 7. Further, after considering the Examiner's analysis (Answer, page 5) of the limitations of Appellants' claim 8, it is our view that all of the claimed elements exist in the multiplier circuit illustrated in Figure 7 of Iyengar. The claimed comparator is illustrated at 94 of Iyengar's Figure 7 and is shown coupled to a stabilizing feedback circuit with the voltage at node 108 equaling the voltage at line MVA (Iyengar, col. 17, lines 48-53). The voltage divider 118, 120 of Iyengar in turn operates to reduce the multiplied voltage dependent on the values of resistors 118 and 120 as described at column 16, lines 38-42. Further, we agree with the Examiner's analysis (Answer, page 6) that Iyengar's P-channel transistors 110 and 112 and voltage divider resistors 118 and 120 meet all of the requirements of dependent claims 9-14. Accordingly, all of the elements of claims 8-14 have been shown to be fully disclosed by Iyengar. A disclosure that anticipates under 35 U.S.C. § 102 also renders the claim unpatentable under 35 U.S.C. § 103, for

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"anticipation is the epitome of obviousness." Jones v. Hardy, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984). See also In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982); In re Pearson, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974). Thus, we sustain the examiner's rejection of appealed claims 8-14 under 35 U.S.C.

§ 103.⁵

In summary, we have not sustained the 35 U.S.C. § 112, second paragraph, rejection of claims 8-14. In addition, we have not sustained the 35 U.S.C. § 103 rejection of claims 1-7 and 15, but have sustained the 35 U.S.C. § 103 rejection of claims 8-14. Therefore, the Examiner's decision rejecting claims 1-15 is affirmed-in-part.

⁵ The Board may rely on one reference alone in an obviousness rationale without designating it as a new ground of rejection. In re Bush, 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); In re Boyer, 363 F.2d 455, 458, n.2, 150 USPQ 441, 444, n.2 (CCPA 1966).

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

AFFIRMED-IN-PART

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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