

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YUJI ISOBE and
CHII-FA CHIOU

Appeal No. 1999-1640
Application No. 08/782,464

ON BRIEF

Before THOMAS, HAIRSTON, and RUGGIERO, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 1 through 3, 5, 7 through 16, and 18 through 29.¹

¹ We note in passing that the amendment filed on March 10, 1998 before the Answer was entered by the examiner and the amendment filed after the Answer, filed on November 2, 1998, was also entered by the examiner as acknowledged in the examiner's communication mailed on November 13, 1998.

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Representative claim 1 is reproduced below:

1. An H-bridge circuit comprising:

a load having a first and a second port;

first and second switches coupled to said first and said second port to switch the load;

first and second cascode switching elements coupled between said load and said first and said second switches;

wherein said first and second cascode switching elements each comprising at least one cascode transistor having a base port resistively coupled to a first bias voltage and a collector port clamped with respect to said base port.

The following references are relied upon by the examiner:

Brannon et al. (Brannon) 5,345,346 Sep. 6, 1994

Appellants' admitted prior art in disclosed Figures 1 and 2

Claims 1 through 3, 5, 7 through 16, and 18 through 29 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon appellants' admitted prior art Figures 1 and 2 in view of Brannon.

Rather than repeat the positions of the appellants and the examiner, reference is made to the briefs and the answer for the respective details thereof.

Opinion

Since we have concluded the examiner has not set forth a prima facie case of obviousness, we reverse the rejection of all claims on appeal under 35 U.S.C. § 103.

Although in the statement of the rejection the examiner relies upon both disclosed Figures 1 and 2 as representations of the admitted prior art, the examiner's reasoning focuses upon the structure of Figure 2B. In its broadest form each of the independent claims 1, 11, and 21 on appeal is more reflective of the structure of admitted prior Figure 1B rather than Figure 2B since this latter figure focuses upon current mirrors as a part of the lower switches of known prior art write drivers. The structure of Figure 1B is discussed at the top of page 5 of the specification as filed as being modifiable such that the Schottky transistors may be modeled with Schottky diodes coupled between the base and the collector junctions thereby yielding a clamping function of the base-collector voltage. No corresponding discussion in the specification as filed related to prior art Figure 2B details the operation of the current mirror circuits in the lower portion of this figure as having such a clamping function.

Notwithstanding these considerations however, we find no basis within the reasoning provided by the examiner and the teachings and suggestions from Brannon to have combined either structure of prior art Figure 1B or prior art Figure 2B with that of Brannon to yield the claimed invention of each independent claims 1, 11, and 21 on

appeal. Figure 2B is exclusively relied upon by the examiner in Brannon as a basis for the claimed cascoded switching elements or transistors of the claims on appeal.

We are unpersuaded by the examiner's stated reasoning of Brannon based upon the indication at column 4, lines 45 through 48, and perhaps better stated at column 5, lines 13 through 16, that the use of cascoded transistors reduces the input capacitance of the transistor Q1 in Figure 2 of Brannon over that circuit provided in Brannon's prior art Figure 1 as a basis for combinability with appellants' admitted prior art Figures 1 and 2. There is no stated problem with the input capacitance associated with appellants' prior art Figures 1 and 2 in the discussion of them in the specification as filed.

Moreover, appellants' position at the top of page 7 of the brief that Brannon is directed to a read differential preamplifier which does not include switching elements for switching a load is a compelling argument against obviousness. Each of the claims on appeal requires that the stated switches in the claims actually switch the load also recited in each claim. A read preamplifier as in Brannon forms no such switching function but only outputs a preamplified differential input for subsequent, further amplification. Thus, the artisan would not necessarily have even looked to such preamplifier circuits as in Brannon for teachings to overcome the stated disadvantages of the appellants' admitted prior art Figures 1 and 2 write drivers anyway. We are therefore left with the conclusion that the examiner's basis of the rejection derives from prohibited hindsight based upon appellants'

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disclosed and claimed invention rather than a prospective view of the applied prior art alone.

The examiner's additional view that the claimed clamping operation in each independent claim on appeal was considered by the examiner to have been inherent once the prior art combination is made is ill founded. Even though we recognize from our own study of the appellants' admitted prior art Figures 1 and 2 that the circuit in Figure 1B may be modified to perform the claimed clamping operation, there is no teaching or suggestion from Brannon that it would have been obvious for the artisan to do so as observed by appellants at page 7 of the brief. Since the examiner has not presented us with evidence of any valid basis to have modified appellants' prior art Figures 1 and 2 utilizing cascoded switching elements or transistors, we must reverse the rejection of each independent claim on appeal since each of them in some way recites such a circuit arrangement. As such, we must therefore reverse the rejection of each of the respective dependent claims as well.

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In view of the foregoing, the decision of the examiner rejecting claims 1 through 3, 5, 7 through 16, and 18 through 29 under 35 U.S.C. § 103 is reversed.

REVERSED

James D. Thomas)
Administrative Patent Judge)
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) BOARD OF PATENT
Kenneth W. Hairston)
Administrative Patent Judge) APPEALS AND
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