

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HERMANN ZIERHUT

Appeal No. 94-1021
Application 07/802,089¹

HEARD: February 28, 1996

Before THOMAS, KRASS and CARDILLO, Administrative Patent Judges.
THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellant has appealed to the Board from the examiner's final rejection of claims 1 to 15, which constitute all the claims in the application.

¹ Application for patent filed December 3, 1991.

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BOARD OF PATENT APPEALS
AND INTERFERENCES

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capacitive element has no effect on the falling edge of the second pulse signal as recited in claims 4 and 5.

Finally, claims 1 to 15 stand rejected under 35 U.S.C. § 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. § 103 as being obvious over Ott.

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

OPINION

In an effort to provide an adequate understanding of the disclosed basis of the claimed invention, we consider first the rejection of claims 1 to 15 under 35 U.S.C. § 112, first paragraph.

The test to be applied to a rejection under the first paragraph of 35 U.S.C. § 112 as it pertains to the written description requirement thereof is whether the disclosure of the application as originally filed reasonably conveyed to the artisan that the inventor had possession at that time of later claimed subject matter. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 19 USPQ2d 1111, re'hrq denied, (Fed. Cir. July 8, 1991) and re'hrq, en banc denied, (Fed. Cir. July 29, 1991).

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Since appellant set forth the term "pulse tilt effect" in original claim 1 on appeal, there is no question in our mind that appellant had possession of the presently claimed invention as of the original filing date of this application. Additional portions of the specification per se that relate to this term and its express usage include the Abstract in lines 3 to 7; the Background of the Invention discussion at page 1, lines 14 to 21; page 2, lines 9 to 13; page 3, lines 29 to 37 and page 4, lines 10 to 14. As such, the examiner's rejection of claims 1 to 15 under 35 U.S.C. § 112, first paragraph, as being based upon a disclosure that does not provide an adequate written description of the presently claimed invention must be reversed.

To the extent the examiner's position possibly may be based upon the enabling provision of 35 U.S.C. § 112, first paragraph, we must also reverse any rejection thereunder. This provision requires that the disclosure must adequately describe the claimed invention so that the artisan could practice it without undue experimentation. In re Scarbrough, 500 F.2d 560, 182 USPQ 298 (CCPA 1974) and In re Brandstadter, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973). The above-noted portions of the specification clearly indicate to us that the pulse tilt effect was well described within the enabling portion of 35 U.S.C. § 112 such

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that the artisan could have practiced the claimed invention without undue experimentation. Additionally, we note that even though this definition was not referenced in the brief, the term "pulse tilt" was originally defined by appellant at page 4 of the amendment filed on August 31, 1992 by making reference to the IEEE Standard Dictionary of Electrical and Electronics Terms, 3rd Edition, which was published in 1984. At page 705 of that Dictionary, the term "pulse tilt" is defined as a "distortion in an otherwise essentially flat-topped rectangular pulse characterized by either a decline or a rise of the pulse top." Thus, the phrase "pulse tilt" was clearly a "term of art." As such, the artisan would have been well versed in its meaning and understanding in addition to the application of it to the disclosed invention. Therefore, it is clear that, to the extent that the examiner's position regarding the rejection under 35 U.S.C. § 112 may have been construed as being based upon the enabling provision thereof, we also reverse this rejection.

With this understanding of the disclosed invention, we turn next to the rejection of the claims under the second paragraph of 35 U.S.C. § 112. It is to be noted that to comply with the requirements of the cited paragraph, 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 and

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the teachings of the prior art as it would be by the artisan. Note In re Johnson, 558 F.2d 1008, 194 USPQ 187 (CCPA 1977) and In re Moore, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971).

We have reviewed the examiner's reasons in support of the rejection and are convinced that claims 4 and 5 fail to comply with the second paragraph of § 112. These claims recite that the capacitive element has "no effect on a second pulse part, particularly in a falling or kick-back pulse of the second signal." We agree with the examiner and do not understand how the capacitive element alone can have such a "no effect" on the second pulse part. This "no effect" is only guaranteed to occur in the Figure 4 embodiment as discussed at specification page 4, line 20 to page 5, line 2. This "no effect" does not appear to us to be achieved in the Figure 2 embodiment where the capacitive element alone is added and said to effect only the first pulse part at specification page 4, lines 5 to 14. Appellant's arguments in the brief even hint that other non-recited structure is necessary to achieve the "no effect" capability claimed than only the capacitive element recited. Claims 4 and 5 are therefore functionally incomplete and misdescriptive.

We reverse the alternative rejection of claims 1 to 15 under 35 U.S.C. § 102. As the teachings of art apply to independent

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claim 1 on appeal, we cannot ascertain from our own understanding and study of Ott that the claimed device³ for compensating for pulse tilt effects would have been provided by any function from Ott as argued by the examiner. For us to sustain the examiner's rejection, we would have to resort to speculation or unfounded assumptions to supply deficiencies in the factual basis of the rejection under 35 U.S.C. § 102 based upon Ott's teachings and as the examiner applies them to the claimed pulse tilt effects being compensated for by the claimed device in claim 1 on appeal. In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), re'hrq. denied, 390 U.S. 1000 (1968). We are not inclined to dispense with proof by evidence when the proposition as advocated by the examiner is not supported by a teaching in a prior art reference, common knowledge or capable of unquestionable demonstration. In re Knapp-Monarch Co., 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961) and In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966).

Turning lastly to the rejection of claims 1 to 15 alternatively under 35 U.S.C. § 103, we will sustain this rejection as it applies to claims 1 to 8 and 12 to 15.

³ We note in passing here as we did during oral hearing that claim 1 may be construed as constituting a single means claim. Since this matter has not been raised by the examiner, we decline to pursue it further.

The examiner's statement of the rejection at pages 4 and 5 of the final rejection relies principally upon the capacitor 14 and the switch 4 as providing the compensation for the claimed pulse tilt effects in claim 1 on appeal in addition to the explained reliance upon the expected coupling circuit 10 to operate according to the desired functions as expressed by the examiner. We note again our discussion earlier with respect to our understanding and the artisan's understanding of the disclosed and claimed invention with respect to the issues presented by the examiner within 35 U.S.C. § 112, first and second paragraphs, and note further appellant's recognition at oral hearing that the artisan would have recognized and the prior art did recognize that the analogous common bus 3 in Ott presented a situation to the artisan where the users of the bus would have effectively inductively loaded the square-wave signals propagated along this bus as reflected in the showing in Figure 2 of Ott. The switch 4 is disclosed in Ott as comprising a transformer with at least two branches. One branch is called the bus branch 11 which provides DC power to the coupling circuit 10, where this branch comprises two windings on the same side of the core of transformer 4 as reflected in Figure 1. A second branch is branch 8 and it

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provides bi-directional transmission of data signals to and from the transceiver 9 which forms a part of the coupling circuit 10. The winding for this branch 8 is on the opposite side of the core represented in Figure 1.

Although we well understand the examiner's reasoning for the basis of this rejection, it appears to us that the artisan would have well recognized that the data branch 8 would have been the branch of the transformer 4 which needed to have been compensated for because of the inductive loading of data propagated through the transformer 4. The two conductors of the branch 8 in Figure 1 of Ott clearly, to the artisan, would have presented some capacitive loading or compensation as normal stray and parasitic capacitance would have been found in the normal circuit layout of these conductors. To provide adequate compensation for the inductive loading, the artisan would have well recognized that it would have been obvious to have compensated for inductive loading by the use of a capacitor across the two conductors 8 in the manner broadly recited in claims 1 and 2. It is well known in basic electrical engineering that essentially inductors and capacitors provide opposite or complementary effects upon AC signals and that the use of one in parallel may counteract or

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compensate for the loading effects of the other upon a normal AC circuit. This is the basis of normal filter circuit design using inductors and capacitors. Such components provide LC filters which have been well known in the art to provide wave shaping.

As to dependent claim 2, we note further that the claimed "coupling" is not coextensive with the use of terminology which conveys a direct electrical connection between components or signals. Clearly, in the context of Ott signals from the transmit and receiver stations 2 to/from the bus 3 are electrically inductively "coupled" therebetween. As explained with respect to our analysis of claim 1, the use of the capacitive element for compensating for pulse-tilt effects would have been clearly obvious to the artisan.

As to argued dependent claim 8, we repeat our "coupling" analysis as expressed with respect to claim 2. In the context of Ott as applied by the examiner with respect to this claim, the use of the word "coupling" in two instances in claim 8 on appeal clearly does not convey a direct connection of windings and signals and/or elements. Using transformers for coupling data signals was well known in the art as represented by Ott.

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We reverse the rejection of dependent claims 9 to 11 under 35 U.S.C. § 103. Although we may agree with the examiner that the artisan's understanding of the normal circuit components which would have been expected to have been found within coupling circuit 10 of Ott in addition to those shown in Figure 1 would have included a diode, we are not in agreement with the examiner's view that the exact circuit arrangement of the components recited first in dependent claim 9 would have been reasonably expected or taught or suggested from Ott to the artisan within 35 U.S.C. § 103. The formation of a charging and discharging circuit in claim 9 is based upon pure conjecture and speculation. As expressed earlier with respect to our reversal of the rejection of claims under 35 U.S.C. § 102, we decline to speculate here. The propriety of reversing the rejection of dependent claims 10 and 11 becomes clearer when the features recited therein are considered in combination with the earlier recited features in claim 9 from which claims 10 and 11 successively depend.

Since appellant has grouped the claims for art rejection purposes in a particular manner as recited at the fourth page of the brief and the initial portion of the reply brief, the remaining dependent claims 3 to 7 and 12 to 15 fall with respect to our analysis of independent claim 1, dependent claim 2 and dependent claim 8. In re Nielson, 816 F.2d 1567, 2 USPQ2d 1525 (Fed. Cir.

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1987); In re Kaslow, 707 F.2d 1366, 217 USPQ 1089 (Fed. Cir. 1983) and In re Wiseman, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979). Our reasoning for affirming the rejection of the noted claims under 35 U.S.C. § 103 enhances and complements that reasoning set forth by the examiner. In addition, it reflects skill of the artisan which is presumed. In re Sovish, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985). Artisans are presumed to know something about the prior art apart from what the references specifically disclose. In re Jacoby, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969). Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein. In re Bode, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

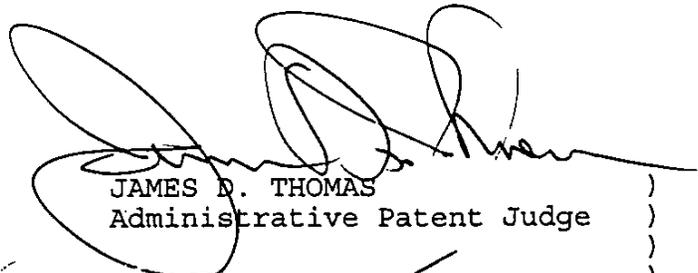
In view of the foregoing, we have reversed the examiner's rejection under the 35 U.S.C. § 112, first paragraph, and have reversed the rejection of claims 1 to 15 under 35 U.S.C. § 102. However, we have sustained the rejection of claims 4 and 5 under 35 U.S.C. § 112, second paragraph, and the rejection of claims

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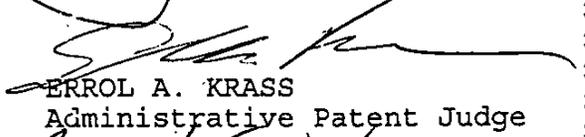
1 to 8 and 12 to 15 under 35 U.S.C. § 103, reversing the rejection of claims 9 to 11 thereunder. Accordingly, the decision of the examiner is affirmed-in-part.

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

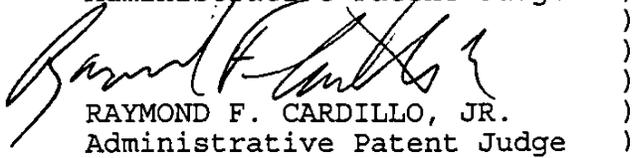
AFFIRMED-IN-PART



JAMES D. THOMAS
Administrative Patent Judge



ERROL A. KRASS
Administrative Patent Judge



RAYMOND F. CARDILLO, JR.
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