

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHIAKI TANIGUCHI and TOSHIYA KITAGAWA

Appeal 2007-0973
Application 10/254,835
Technology Center 2800

Decided: May 31, 2007

Before KENNETH W. HAIRSTON, HOWARD B. BLANKENSHIP, and MAHSHID D. SAADAT, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1-28, the only claims pending in this application. We have jurisdiction under 35 U.S.C. §§ 6(b), 134(a).

INTRODUCTION

The claims are directed to a radio guidance antenna in which the sum of mutual inductances of antennae is minimized, and a data communications method and a non-contact data communication apparatus which make use of the radio guidance antenna. (Abstract.) Claim 1 is illustrative:

1. A radio guidance antenna comprising:

first and second antennas,

wherein

the first antenna has at least two regions for generating lines of magnetic flux in reciprocal directions, and the second antenna has first (S1) and second (S2) mutual inductances for generating induced electromotive forces in opposite directions due to electromagnetic induction from the first antenna,

the second antenna being arranged so that the sum of mutual inductances between it and the first antenna is minimized.

The Examiner relies on the following prior art reference to show unpatentability:

Bowers US 5,602,556 Feb. 11, 1997

The rejection as presented by the Examiner is as follows:

1. Claims 1-28 are rejected under 35 U.S.C. § 103(a) as unpatentable over Bowers.

OPINION

Section 103 rejection over Bowers

Appellants submit (Br. 9) there is no teaching or suggestion in Bowers regarding minimizing the sum of mutual inductances of the antennae as recited in representative claim 1. Appellants argue that in Figure 4 of

Bowers, because of the relative dimensions shown in the drawing, figure-8 antenna 38 and loop antenna 12 are not of the proper relative size and positioning to minimize the sum of mutual inductances. (Br. 10-11.)

Appellants seem to answer their own argument, however, with the acknowledgement that patent drawings are generally presumed to “not be in scale.” (*Id.* at 11.) Appellants do not show that Bowers’ Figure 4 is intended to be drawn to scale. Appellants are correct to the extent that conclusions based on the dimensions and relative arrangements of the antennae of Figure 4 are of little value. *See In re Wright*, 569 F.2d 1124, 1127, 193 USPQ 332, 335 (CCPA 1977) (“Absent any written description in the specification of quantitative values, arguments based on measurement of a drawing are of little value.”); *In re Wilson*, 312 F.2d 449, 454, 136 USPQ 188, 192 (CCPA 1963) (“Patent drawings are not working drawings [and arguments are not persuasive when based on a] drawing obviously never intended to show the dimensions of anything.”). We thus find the argument based on the configuration depicted in Figure 4 to be untenable.

Appellants also submit that the reference at column 9, lines 14 through 23 refers to Figure 4 as the top and bottom loops 42, 44 of the figure-8 loop element 38 being shown as generally equal in area, but they need not be of equal area. According to Appellants, this says nothing about areas of mutual inductance between antenna 12 and antenna 38 which are affected by the location of antenna 21 relative to antenna 38. (Br. 11-12.) The referenced section of Bowers also teaches, however, that providing loops of equal areas aids in cancelling far field coupling.

Moreover, the Examiner also relies on material in column 5 of Bowers, discussing mutual magnetic coupling between antenna elements, as

support for the rejection. The Examiner finds that the “mutual magnetic coupling” described in the reference is no different from the claimed “mutual inductance.” Bowers teaches, in the text at column 5, that cancellation of electromagnetic fields generated by antenna elements may be effected by maximizing opposite phase current in loop elements, and that mutual coupling is thus minimized. Bowers col. 4, l. 66 - col. 5, l. 44.

We do not find any arguments in the briefs that address Bowers’ teachings at column 5. When questioned on the point at the oral hearing, Appellants’ representative indicated that the arguments bridging pages 11 and 12 of the Brief, discussing the material at column 9 that refers to Figure 4, served as a response to the Examiner’s findings with respect to column 5 of the reference.

We find, however, that the Examiner has provided reasonable inferences with respect to the physical processes described in column 5 of Bowers, which serve as further explanation of the embodiment of Figure 4. We also observe that Bowers’ further description of ways to provide far field cancellation (col. 1, l. 44 - col. 2, l. 2) is similar to Appellants’ teachings of how to minimize the sum of mutual inductances between antennae. Bowers is nominally directed to cancelling or minimizing far field antenna effects. However, we find substantial support in Bowers for the Examiner’s finding that antenna arrangements taught by the reference also serve to minimize the sum of mutual inductances between antenna elements.

The Examiner has set forth at least a *prima facie* case for unpatentability of instant claim 1. Appellants’ arguments to the contrary are not persuasive. Appellants have not adduced evidence to call into question

any of the Examiner's findings in support of the rejection. We sustain the rejection of claim 1.

Appellants place remarks for claims 2, 3, 19, and 28 under separate headings in the Brief. The remarks, however, consist of repeating limitations from the dependent claims, and submitting that Bowers fails to disclose or suggest the respective limitation because Bowers fails to disclose the limitation. To the extent the remarks may be considered separate arguments for patentability, the arguments do not show error in the Examiner's position as set out in the Answer. The rejection applied against the dependent claims does not assert that Bowers discloses the limitations, but that the limitations would have been obvious in view of the teachings of the reference. Appellants having not shown error in the rejection of any of claims 1-26 and 28, we sustain the § 103 rejection over Bowers.

We agree with Appellants, however, that the evidentiary basis for the rejection of claim 27 is insufficient. We do not sustain the rejection of the claim. We enter a new ground of rejection against claim 27, *infra*.

New ground of rejection

We enter the following new ground of rejection against the claims in accordance with 37 C.F.R. § 41.50(b): Claim 27 is rejected under 35 U.S.C. § 102(e)(2) as being anticipated by U.S. Patent 6,570,490 B1 ("Saitoh").

<p><i>Claim 27</i></p> <p><i>A method of operating a non-contact identification device, comprising:</i></p>	<p>Saitoh</p> <p>Describes a method of operating a contactless IC card (identification device)</p>
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<p><i>generating an induced electromagnetic force in an antenna belonging to a tag;</i></p>	electromagnetic field emitted from antenna 67 (Fig. 3) induces electromagnetic force (emf) in patch antenna 62 of IC card (tag) 61; col. 2, ll. 32-46
<p><i>providing electric power to said tag;</i></p>	electric power is provided to the tag by circuit 22b (Fig. 1) in transmit/receive circuit 63 (Fig. 3); col. 1, ll. 16-32; col. 3, ll. 20-29
<p><i>relaying said electromagnetic force to a demodulator circuit through an impedance matching circuit;</i></p>	the emf is relayed to demodulator circuit 22a (Fig. 1) through impedance matching circuit 2, 3, 9, both circuits residing in transmit/receive circuit 63; col. 2, l. 54 - col. 3, l. 19
<p><i>demodulating said electromagnetic force;</i></p>	the emf is demodulated by transmit/receive circuit 63 (Fig. 3) and relayed to CMOS logic circuit 64
<p><i>decoding a data signal resulting from said demodulating; and</i></p>	the demodulated signal is decoded by CMOS logic circuit 64, which separates a clock and data from the signal received from transmit/receive circuit 63 through terminal 10 (Fig. 1); col. 3, ll. 15-17
<p><i>storing data from within said data signal into a storage circuit.</i></p>	CMOS logic circuit 64 stores the data to memory 65; col. 2, ll. 44-46

Claim 27 is thus anticipated by Saitoh. The reference was found after a cursory search of the U.S. patent database, and is thus not necessarily the best available reference against the claim. In the event of further prosecution of claims similar in scope to instant claim 27, the Examiner should perform a full search to identify and apply the best reference.

CONCLUSION

The rejection of claims 1-28 under 35 U.S.C § 103(a) as unpatentable over Bowers is affirmed with respect to claims 1-26 and 28 but reversed with respect to claim 27.

A new rejection of claim 27 under 35 U.S.C. § 102(e)(2) over Saitoh is set forth herein.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (2006). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(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 ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART -- 37 C.F.R. § 41.50(b)

tdl/ce

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