

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DARRELL G. EPPERSON

Appeal No. 2001-0817
Application No. 09/048,876

ON BRIEF

Before HAIRSTON, DIXON, and GROSS, Administrative Patent Judges.
HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 4 through 8, 10, 13 through 15, 18 and 19.

The disclosed invention relates to a radio frequency (RF) transceiver that comprises a circulator with first, second and third circulator ports. An antenna is coupled to the second circulator port, a duplexer is coupled to the third circulator port that generates a receive signal, and first and second amplifiers and a bandpass filter are coupled to the first circulator port. The first amplifier is coupled to a transmit

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signal, the second amplifier is coupled to the first circulator port and the bandpass filter is located between the two amplifiers.

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

1. A radio frequency (RF) transceiver comprising:

a circulator including first, second and third circulator ports, that circulates power from the first circulator port to the second circulator port to the third circulator port and then to the first circulator port;

first and second amplifiers and a bandpass filter therebetween, the first amplifier being coupled to a transmit signal and the second amplifier being coupled to the first circulator port;

an antenna that is coupled to the second circulator port; and

a duplexer that is coupled to the third circulator port and that generates a receive signal.

The references relied on by the examiner are:

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| Green, Jr. (Green) | 5,701,595 | Dec. 23, 1997 |
| Yamada et al. (Yamada) | 5,768,690 | Jun. 16, 1998 |
| | | (filed Oct. 10, 1995) |
| Fukuden | 5,805,023 | Sep. 8, 1998 |
| | | (filed Oct. 31, 1995) |

Claims 1, 4 through 8, 10, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Green in view of Fukuden.

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Claims 15, 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Green in view of Fukuden and Yamada.

Reference is made to the brief (paper number 8) and the answer (paper number 9) 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 obviousness rejection of claims 1, 4 through 8, 10, 13 through 15, 18 and 19.

We agree with the examiner's factual findings (answer, pages 3 and 4) that Green discloses all of the structure of claim 1 with the exception of "first and second amplifiers and a bandpass filter therebetween." We likewise agree with the examiner's finding (answer, page 4) that Fukuden discloses (Figure 16) "a transmission path in a radio frequency transceiver that includes amplifiers 211 and 211' and bandpass filter 203'." The examiner indicates (answer, page 4) that "[a]lthough Fukuden doesn't shows [sic, show] that the bandpass filter 203' is between the amplifiers 211 and 211', it is considered, in the art of power amplifiers, that locating the bandpass filter 203' between the amplifiers 211 and 211' would have the same effect (eliminate or reduce the noise and/or unnecessary frequency

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components) (column 9 line 60 - column 10 line 2) as to locate it before the amplifiers 211 and 211' as shown by Fukuden." The examiner concludes (answer, pages 4 and 5), therefore, that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the amplifier structure of Green, Jr. with the amplifier structure of Fukuden in order to have a radio frequency transceiver capable of simply eliminate [sic, eliminating] or reduce [sic, reducing] the noise and/or unnecessary frequency components in a radio frequency signal to be transmitted as well as reduce the power consumption when transmitting said radio frequency signal."

Appellant argues (brief, pages 4 through 7) that impermissible hindsight provided the motivation to combine the teachings of the applied references since there is a lack of evidence in the record to support the examiner's proposed modification to the teachings of Green based upon the teachings of Fukuden.

We agree with appellant's arguments. As indicated in In re Lee, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002), the examiner's finding of whether there is a teaching, motivation or suggestion to combine the teachings of the applied references must not be resolved based on "subjective belief and

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unknown authority," but must be "based on objective evidence of record." Other than appellant's disclosed and claimed invention, nothing in the record supports the examiner's conclusion that it would have been obvious to the skilled artisan to move the bandpass filter from one location to another in Fukuden and then replace the amplifier structure disclosed by Green with the modified structure in Fukuden. Inasmuch as appellant's teachings are not available to the examiner in an obviousness determination, we will reverse the obviousness rejection of claims 1, 4 through 8, 10, 13 and 14.

The obviousness rejection of claims 15, 18 and 19 is likewise reversed because the teachings of Yamada do not cure the noted shortcomings in the teachings of Green and Fukuden.

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DECISION

The decision of the examiner rejecting claims 1, 4 through 8, 10, 13 through 15, 18 and 19 under 35 U.S.C. § 103(a) is reversed.

REVERSED

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| KENNETH W. HAIRSTON |) | |
| Administrative Patent Judge |) | |
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| |) | BOARD OF PATENT |
| JOSEPH L. DIXON |) | APPEALS AND |
| Administrative Patent Judge |) | INTERFERENCES |
| |) | |
| |) | |
| ANITA PELLMAN GROSS |) | |
| Administrative Patent Judge |) | |

KWH:hh

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