



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/105.065 05/11/2011 John K. Schneider 013325.00228 2509

79659 7590 11/25/2016
Weaver Austin Villeneuve & Sampson LLP - QUAL
Attn: QUAL
P.O. Box 70250
Oakland, CA 94612-0250

EXAMINER

GEROLEO, FRANCIS

ART UNIT PAPER NUMBER

2485

NOTIFICATION DATE DELIVERY MODE

11/25/2016

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@wavsip.com
ocpat_uspto@qualcomm.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN K. SCHNEIDER and JACK C. KITCHENS¹

Appeal 2016-001238
Application 13/105,065
Technology Center 2400

Before KRISTEN L. DROESCH, LARRY J. HUME, and
TERRENCE W. MCMILLIN, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek review under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–15, all of the pending claims in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

The disclosed invention relates to an ultrasonic reflex imaging device and method that may be used to gather fingerprint image data. *See* Spec. ¶¶ 2–5, 15, 17; Abstract.

¹ Appellants indicate the real party-in-interest is Qualcomm Inc. App. Br. 2.

Representative claim 1, reproduced from the Claims Appendix of the Appeal Brief, reads as follows:

1. An ultrasonic reflex imaging device comprising:
 - a platen;
 - an insonification device capable of generating a substantially planar ultrasonic wave; and,
 - an ultrasonic receiver array positioned between the platen and the insonification device such that a substantially planar ultrasonic wave emitted by the insonification device travels via the receiver array before reaching the platen.

REJECTIONS

Claims 1, 6, 11, 14, and 15 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bicz (US 5,828,627 issued Oct. 27, 1998) and Grill (US 5,258,922 issued Nov. 2, 1993).

Claims 2, 7, 8, and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bicz, Grill, and Schneider et al. (US 2008/0258580 A1, published Oct. 23, 2008).

Claims 3–5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bicz, Grill, and Seyed–Bolorforosh (US 5,486,734, issued Jan. 23, 1996).

Claims 9, and 10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bicz, Grill, and Nam (US 2005/0105784 A1, published May 19, 2005).

Claim 13 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Bicz, Grill, and Applicants' Admitted Prior Art.

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellants' arguments in the Appeal Brief, the Answer, and the arguments in the Reply

Brief. We do not agree with Appellants' arguments. We agree with and adopt as our own the Examiner's findings and conclusions of law. We highlight and address specific findings, conclusions, and arguments below for emphasis.

The Examiner finds that Bicz teaches or suggests "an ultrasonic receiver array positioned between a platen and an insonification device such that an ultrasonic wave emitted by the insonification device travels via the receiver array before reaching the platen," as recited on claim 1.

Figure 3 of Bicz is reproduced below:

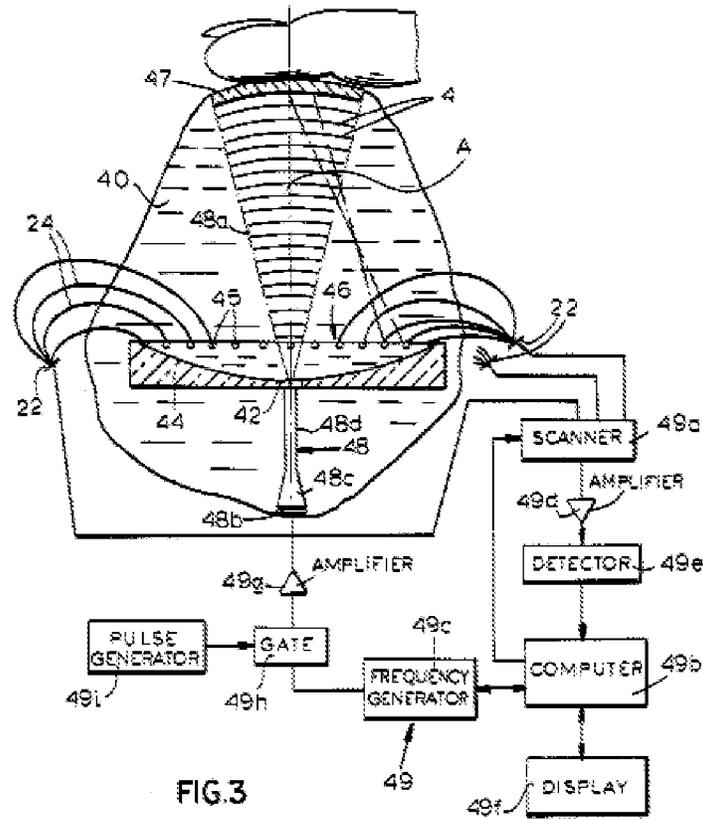


Figure 3 depicts ultrasonic transducer 48b, support 47, carrier 44, spherical carrier surface 43, hole 42, and on surface 43 numerous receiving collectors 45 in a receiving collector ring or annual array 46. Bicz 4:12–35.

Referring to Figure 3 of Bicz reproduced above, the Examiner bases the aforementioned finding on Bicz's disclosure of carrier 44, surface 43, hole 42, collectors 45, and receiving collector ring or annular array 46 positioned between support 47 and transducer 48b such that an ultrasonic wave emitted by the transducer 48b travels via carrier 44 that receives waves from transducer 48b via hole 42 before reaching support 47. Final Act. 2–3 (citing Figs. 1–3; 2:63–3:6; 3:57–65; 4:12–35).

Appellants argue Bicz teaches ultrasonic waves travel sequentially from transducer 48b through hole 42 to the support 47 and then to collectors 45 positioned in an annular array 46. App. Br. 7 (citing Bicz 1:25–34). Appellants contend the words of the claim must be given their plain meaning unless such meaning is inconsistent with the Specification and provide the following dictionary definitions for via: “1: by way of, 2: through the medium or agency of, also by means of.” *Id.* (citing MERRIAM WEBSTER'S COLLEGIATE DICTIONARY, 10th ed.). Appellants contend, without sufficient explanation, the ultrasonic waves of Bicz and Grill do not travel by way of the receiver array, through the medium of the receiver array, through the agency of the receiver array, and by means of the receiver array. *Id.* at 7, 10. Further, Appellants choose, without explanation, the “through the medium” definition for “via,” and argue Bicz does not disclose or suggest the ultrasonic waves travel through the medium of carrier 44, surface 43, collectors 45, or annular array 46 before reaching support 47. *Id.* at 8–9; Reply Br. 3, 6. Appellants contend Bicz requires a hole 42 in carrier 44, (characterized by Appellants as an absence of a medium), so that the ultrasonic waves can reach the support without traveling through the medium of any system components. *Id.* at 9, 10.

We are not persuaded by Appellants suggestion that the plain meaning of “via” is limited to “through the medium of,” while excluding other ordinary and customary meanings for the term. Appellants’ Specification discloses an ultrasonic pulse travels *through* the ultrasonic receiver array which includes piezoelectric detectors and an associated insulating substrate. Spec. ¶¶ 17, 18, 21; Fig 3. The “by way of,” plain meaning of via while broader than “through the medium of,” is consistent with Appellants’ Specification. Appellants do not provide persuasive argument for discounting the inclusion of “by way of,” in the plain and ordinary meaning of “via.” We further decline Appellants’ invitation to limit the plain meaning of the term “via” based on the Specification’s use of the term “through” when discussing the ultrasonic pulse traveling through the receiver array. *See* Spec. ¶¶ 14, 17, 21. Having established that the plain meaning of “via” includes “by way of,” we are not persuaded by Appellants argument that Bicz does not disclose the disputed limitation of claim 1. Consistent with the Examiner’s findings, Bicz teaches the ultrasonic wave travels via (i.e., by way of) hole 42 in carrier 44 of numerous receiving collectors 45 in collector ring or annular array 46.

In regard to the structure taught by Bicz, Appellants argue carrier 44, surface 43, and hole 42 are separate and distinct elements from any component in Bicz that could be fairly characterized as a receiver array. App. Br. 10. Appellants contend in Bicz, the ultrasonic receiver array corresponds to annular array 46 having numerous small receiving collectors 45. *Id.* at 10; *see* Reply Br. 3. Appellants further assert Bicz does not characterize carrier 44, surface 43, and hole 42 as being part of an ultrasonic receiver array. App. Br. 10; *see* Reply Br. 4. Appellants contend the

annular array 46 is capable of detecting ultrasonic energy without carrier 44, surface 43, and hole 42 and, therefore, the carrier 44, surface 43, and hole 42 do not comprise the ultrasonic receiver array. App. Br. 10; *see* Reply Br. 5.

Appellants' arguments are not persuasive as they are premised on a narrow meaning of the claimed "receiver array" that includes only elements that perform the function of receiving, while excluding support structure for those elements. Appellants do not direct us to objective evidence to support this implicit narrow construction of "receiver array." *See* App. Br. 10; Reply Br. 5.

Appellants' Figure 1 is reproduced below:

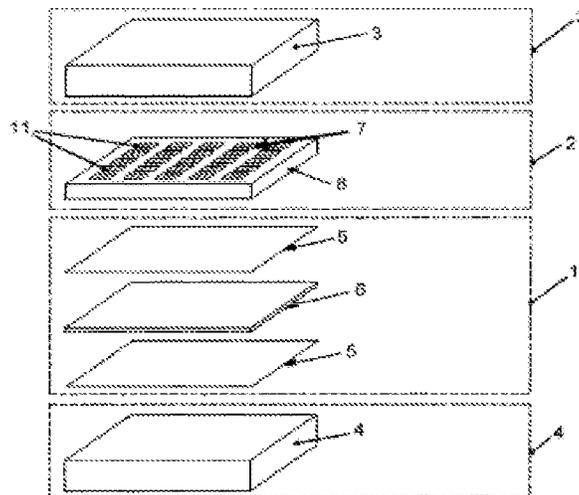


Figure 1

Figure 1 depicts an exploded perspective view of platen 3, receiver array 2, ultrasonic plane wave generator 1, and backer 4. Spec. ¶¶ 16, 17.

Referring to Figure 1 reproduced above, Appellants' Specification discloses receiver array 2 includes array 7 of piezoelectric detectors 11 and associated substrate 8. Consistent with Appellants' Specification, the broadest reasonable interpretation of the claimed "receiver array" includes supporting structure for the receiver elements. Based on the broadest

reasonable interpretation of “receiver array,” we agree with the Examiner’s finding that the claimed “receiver” array is taught by Bicz’s carrier 44, carrier surface 43, hole 42, and receiving collectors 45 in collector ring or annular array 46. *See* Final Act. 2–3.

We also are not persuaded by Appellants’ arguments that neither Bicz nor Grill teach or suggest a substantially planar ultrasonic wave that travels via the receiver array before reaching a platen. *See* App. Br. 11. Appellants’ arguments address the teachings of Bicz alone, and do not address the combined teachings of Bicz and Grill. *See id.* (citing Bicz 4:17–19); Reply Br. 6. One cannot show non-obviousness “by attacking references individually where the rejection is based on the combination of references.” *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Lastly, Appellants argue the combination of Bicz and Grill is improper. App. Br. 11–12. Specifically, Appellants contend, because Bicz teaches perfectly spherical waves, Bicz teaches away from using the transducer techniques of Grill. *Id.* at 12; Reply Br. 7. Appellants contend “any attempt to alter Bicz by substitution a planar wave for Bicz’s spherical wave to cause substantially planar waves to reach the platen . . . would create a device with significantly diminished capability with regard to precision and reliability for determining the surface structure of the object,” and “a substantially planar wave would not be an optimum wave type for the fingerprint determination application in Bicz.” *Id.* at 12; Reply Br. 8.

We are not persuaded that Bicz teaches away from the claimed invention because Bicz teaches spherical ultrasonic waves. “Under the proper legal standard, a reference will teach away when it suggests that the

developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention." *Syntex (U.S.A.) v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005), citing *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Although Bicz teaches spherical ultrasonic waves, the Examiner proposes substituting planar waves, as taught by Grill, for Bicz's teaching of spherical ultrasonic waves. *See* Final Act. 2–4. Appellants do not direct us to objective evidence sufficient to demonstrate that Bicz suggests that the use of planar ultrasonic waves in place of spherical ultrasonic waves is unlikely to produce the objective of Appellants' invention. The teaching of something different does not constitute a teaching away. For similar reasons, we also are not persuaded by Appellants' argument that "any combination involving Bicz necessarily removes the plane wave aspect of transmitter, thereby rendering the resulting device outside the scope of the pending claims," and "lacks a substantially planar ultrasonic wave that travels via the receiver array before reaching the platen." App. Br. 12–13; *see* Reply Br. 8.

We also not persuaded by Appellants' arguments that substituting a planar wave for Bicz's spherical wave would not be optimum and would result in diminished capability regarding precision and reliability because they are not supported by objective evidence of record. It is well settled that attorney argument, unsupported by factual evidence, is entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also In re Pearson*, 494 F.2d 1399, 1405 (CCPA 1974) (attorney argument is not evidence).

For all of the foregoing reasons, Appellants do not persuade us of error in the Examiner's rejection of claim 1. Appellants do not present

Appeal 2016-001238
Application 13/105,065

substantive arguments addressing independent claim 14, which recites limitations similar to claim 1, and dependent claims 6, 11, and 15. *See* App. Br. 13. Therefore, for the same reasons as claim 1, Appellants do not persuade us of error in the rejection of claims 6, 11, 14 and 15. Appellants also do not present substantive arguments addressing the rejections of dependent claims 2–5, 7–10, 12, and 13. *See* App. Br. 13–14. Accordingly, for the same reasons as claim 1, Appellants do not persuade us of error in the rejection of claims 2–5, 7–10, 12, and 13.

DECISION

We AFFIRM the rejection of claims 1–15.

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

AFFIRMED