

REMARKS

Upon entry of these amendments, claims 1-2, and 4-20 are pending in the present application. Claims 1, 4 and 20 are the independent claims. In this response, claims 1, 2, 4, 8-12 and 19-20 have been amended, claim 3 has been canceled, without prejudice or disclaimer. Support for the claim amendments can be found throughout the application as originally filed. No new matter is added.

Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented.

Allowable Subject Matter

The Applicant thanks the Examiner for indicating the claims 4-7, and 10-19 contain allowable subject matter.

Claim Rejections – 35 U.S.C. §§ 102 and 103

Claims 1-2, 8-9 and 20 are rejected under 35 U.S.C. § 102(a)(2) as being anticipated by South Korea Patent Application Publication No. KR 20210007294A to Sung et al. ("Sung"). Claim 3 is rejected under 35 U.S.C. § 103 as being unpatentable over Sung in view of Japan Patent Application Publication No. JP 2011124165 to Shigeoka et al. ("Shigeoka"). Each of these rejections is traversed for the reasons set forth below.

Amended Independent Claim 1 is Patentable over Sung in view of Shigeoka

Unlike amended independent claim 1, which recites "at least one self-heated flux sensor configured to be heated to a temperature setpoint," Sung in view of Shigeoka fails to disclose or suggest this recitation. The Office Action alleges that temperature sensor 30 of Shigeoka maps to the recited self-heated flux sensor of previously pending claim 3, the subject matter of which is incorporated into amended claim 1. Applicant disagrees, for at least the following three reasons.

First, Shigeoka does not disclose the recited, "...sensor **configured to be heated**" of amended claim 1 (emphasis added). At most, the only heating that Shigeoka describes with regard to temperature sensor 30 is incidental and unintended. In fact, Shigeoka's solution is to eliminate the heating associated with temperature sensor 30, "...by reducing the thickness of the central section of the heating coil 24, a region of lower magnetic flux density is created; by positioning the first temperature sensor 30 within this specific region, the sensor's self-heating is mitigated. Consequently, the measurement accuracy of the temperature sensor is enhanced, and overall safety is improved." (paragraph [0059] of Shigeoka; emphasis added). Thus, unlike claim 1, the temperature sensor 30 of Shigeoka is therefore not **configured to be heated**, but instead the exact opposite: the temperature sensor 30 is configured to **not** be heated.

Second, Shigeoka does not disclose the recited, "... sensor... **configured to be heated to a temperature setpoint**" of amended claim 1 (emphasis added). At most, Shigeoka describes regulating an amount of heat applied to a cooking container, "[t]o bring the temperature of the cooking vessel 23 closer to the user-specified setting, the control unit 26 utilizes the temperature detected by the first temperature sensor 30 as feedback... thereby regulating the amount of heat applied to the cooking vessel 23" (paragraph [0056] of Shigeoka; emphasis added). In other words, the Shigeoka system uses feedback to detect a temperature of the cooking vessel to heat it to a user-specified setting. But, unlike claim 1, the temperature sensor 30 of Shigeoka itself is not **configured to be heated to a temperature setpoint**.

Third, the deficiencies of Shigeoka are not rectified by Sung. Sung, too, is silent regarding the foregoing recitation of amended claim 1. Consequently, Shigeoka, alone or in combination with Sung, fails to disclose or suggest the recited self-heated flux sensor of amended claim 1.

At least in view of the foregoing, Applicant respectfully submits that amended claim 1 (and its dependent claims) are patentable over Sung in view of Shigeoka, and Applicant respectfully requests that the rejection be withdrawn.

Amended Independent Claim 20 is Patentable over Sung in view of Shigeoka

Unlike amended claim 20, which recites, "clamping down the sensor package to the sensor holding unit by matching a portion of a sliding ramp with a portion of the sensor holding

unit," Sung in view of Shigeoka fails to disclose or suggest this recitation, for at least the following three reasons.

First, Sung is silent regarding the recited, "clamping down... by matching a portion of a sliding ramp with a portion of the sensor holding unit" of amended claim 20. The sole mechanism by which Sung secures the sensor module 650 to the sensor installation unit 680 is a push-and-rotate key/keyway/flange lock, in which "the sensor module is lowered while aligning the key in the keyway, so that the key reaches a lower part than the flange, and then the sensor module is rotated so that the key is not aligned with the keyway, thereby preventing the sensor module from being separated" (paragraph [0028] of Sung; emphasis added). This mechanism entirely lacks a sliding ramp. Neither the key, the keyway, nor the flange involves a sliding ramp. Furthermore, the sensor installation unit 680 includes no portion to be matched with the sliding ramp. At most, Sung describes a first fitting portion 658 on the module body 651 and a corresponding second fitting portion 672 on the sealing cover 670, but this engagement is merely a neck-fit between the module body 651 and a flexible rubber cover (see paragraphs [0406]-[0407] of Sung), and does not clamp the sensor module 650 to the sensor installation unit 680. Rather, the sealing cover 670 serves only as a waterproofing element that deforms to accommodate vertical movement of the module body 651, and the first and second fitting portions 658, 672 are entirely separate from the retention mechanism that secures the sensor module 650 within the sensor installation unit 680. Thus, unlike amended claim 20, Sung does not disclose or suggest a method of clamping down the sensor module 650 by matching a portion of the sliding ramp with a portion of the sensor holding unit.

Second, Sung is silent regarding the recited, "sliding ramp" of amended claim 20 that facilitates "clamping down the sensor package to the sensor holding unit." At most, Sung describes a sealing cover 670, which is merely a flexible waterproofing element. The sealing cover 670 "covers so as not to be exposed to and prevents liquid such as water from permeating inside the temperature measuring unit 640" (paragraph [0405] of Sung). Moreover, the dome portion 671 of the sealing cover 670 is expressly described as deforming to accommodate vertical movement of the module body of the sensor module 650. Thus, unlike amended claim 20, the sealing cover 670 is not configured to clamp down the sensor module 650, but instead the

exact opposite: the sealing cover 670 is configured to deform to accommodate movement of the sensor module 650.

Third, the deficiencies of Sung are not remedied by Shigeoka. Shigeoka, too, is silent regarding the foregoing recitation of amended claim 20. Consequently, Shigeoka, along or in combination with Sung, fails to disclose or suggest the recited self-heated flux sensor of amended claim 20.

At least in view of the foregoing, Applicant respectfully submits that amended claim 20 is patentable over Sung in view of Shigeoka, and Applicant respectfully requests that the rejection be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance and, therefore, requests an indication of allowability. However, the Examiner is requested to call the undersigned if any questions or comments arise.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283 referencing Docket No. IMPU-008/01US 357792-2023. However, the Director is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: May 12, 2026

Respectfully submitted,
COOLEY LLP

USPTO CUSTOMER No. 58249

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue NW, Suite 700
Washington, DC 20004

Electronic signature: /Michael W. J. Minsch/
Michael W. J. Minsch
Reg. No. 81,816

Tel: (212) 479-6610
Fax: (202) 842-7899