

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]], ~~striketrough~~ and/or underlining. This listing also reflects any cancellation and/or addition of claims.

1. (Currently Amended) A temperature sensing device for an induction stove, comprising:
a sensor package including one or more sensors including at least one self-heated flux sensor configured to be heated to a temperature setpoint;
a plunger assembly configured to hold the sensor package; and
a support base configured to provide a physical support for the plunger assembly.
2. (Currently Amended) The temperature sensing device of claim 1, wherein the plunger assembly includes a movable plunger, a fixed plunger support, and a spring disposed between the movable plunger and the fixed plunger support.
3. (Canceled)
4. (Currently Amended) ~~[[The]]~~ A temperature sensing device for an induction stove, ~~of claim 1, further~~ comprising:
a sensor package including one or more sensors;
a plunger assembly configured to hold the sensor package;
a support base configured to provide a physical support for the plunger assembly; and
one or more auxiliary sensors disposed between the sensor package and the plunger assembly.
5. (Original) The temperature sensing device of claim 4, wherein the one or more auxiliary sensors are disposed inside a chamber of a sensor holding unit.

6. (Original) The temperature sensing device of claim 5, further comprising a compliant bumper disposed between the sensor holding unit and the plunger assembly.
7. (Original) The temperature sensing device of claim 6, wherein each of the sensor holding unit, the compliant bumper, and the plunger assembly has a central hollow portion allowing one or more of a cable or wire to pass through.
8. (Currently Amended) The temperature sensing device of claim 2, wherein the movable plunger has an inner column portion and an outer cap portion disposed on a top side of the movable plunger.
9. (Currently Amended) The temperature sensing device of claim 8, wherein at least a portion of the spring is held between the inner column portion and the outer cap portion of the movable plunger when the plunger assembly is assembled.
10. (Currently Amended) The temperature sensing device of claim 9, wherein the outer cap portion of the movable plunger includes a set of protrusions disposed along a lower edge of the outer cap portion.
11. (Currently Amended) The temperature sensing device of claim 10, wherein the fixed plunger support includes a corresponding set of openings disposed on a side surface of the fixed plunger support.
12. (Currently Amended) The temperature sensing device of claim 11, wherein a protrusion passes through an opening disposed on the side surface of the fixed plunger support and is limited to move within the opening along ~~[[the]]~~ a predefined direction.
13. (Original) The temperature sensing device of claim 5, further comprising a sliding ramp for holding the sensor package and the sensor holding unit together by circularly wrapping the sensor package and the sensor holding unit.

14. (Original) The temperature sensing device of claim 13, wherein the sliding ramp has a conic shape on a top portion of the sliding ramp.
15. (Original) The temperature sensing device of claim 13, further comprising a sensor cap for covering the one or more sensors, wherein a side portion of the sensor cap is disposed between the sensor holding unit and the sliding ramp.
16. (Original) The temperature sensing device of claim 15, wherein the sensor cap includes a non-ferrous thin sheet.
17. (Original) The temperature sensing device of claim 13, further comprises a diaphragm assembly for attaching the sensor package and the plunger assembly to a cooktop of the induction stove.
18. (Original) The temperature sensing device of claim 17, wherein the diaphragm assembly includes an upper collar, a lower collar, an O-ring, and an elastic diaphragm.
19. (Currently Amended) The temperature sensing device of claim 18, wherein the diaphragm assembly includes an upper edge portion that extends into a recessed portion located on a lower edge of the sliding ramp.
20. (Currently Amended) A method for assembling a temperature sensing device, the temperature sensing device including a temperature sensor subsystem that includes a sensor package, a sensor holding unit, a compliant bumper, a plunger assembly, and a support base, and the method comprising:
 - attaching the plunger assembly to the support base;
 - disposing the compliant bumper inside a top hollow portion of a plunger included in the plunger assembly;

positioning the sensor holding unit over the compliant bumper, and positioning the sensor package over the sensor holding unit; and

clamping down the sensor package and the sensor holding unit by matching a portion of
~~using~~ a sliding ramp with a portion of the sensor holding unit.